READINGS IN BASIC EDUCATION

(Reprints from 'Buniyadi Talim')

VOLUME II

Correlation in Basic Education

DEPARTMENT OF BASIC EDUCATION
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING
DELHI

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VOLUME II

Correlation in Basic Education

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NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING
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FOREWORD

'Buniyadi Talim', a quarterly journal of the National Institute of Basic Education, now Department of Basic Education and a constituent unit of the National Council of Educational Research and Training, New Delhi, continued to be published from January, 1958 to October, 1965 when its publication had to be discontinued because of the need for a consolidation of publications of the Council. This magazine published articles, reviews and other writings on Basic Education.

Based on the material published in this magazine, the issue of this series of pamphlets is aimed at putting various writings on different themes related with Basic Education under the same cover. It is hoped that this volume along with the other in the series would provide the readers with a comprehensive view on different aspects of Basic Education and would thus meet the long cherished needs of our readers, students and thinkers of Basic Education.

In the preparation of this volume, in addition to the materials contained in the Buniyadi Talim, it was felt desirable to include three articles by distinguished experts in the field of education which have been published by this Department in different publications. It is hoped that this step would enhance the utility of this book.

The pains taken by Shri R.K. Gupta of this Department in compiling and editing this volume and by Shri M.P. Rastogi in looking after its publication are appreciated.

H.B. MAJUMDER
Head of the Department

INTRODUCTION

Correlation—A Technique of Teaching

Correlation as a technique of teaching and as one of the pillars of the system of Basic education marks out a revolt against the faculty theory of education which lays emphasis on the stuffing of the minds of the educand with isolated and compartmentalised bits of knowledge of different subject content. The philosophy of Basic education gives high priority to the 'all round drawing out of the best in child and man—body, mind and spirit'. Gandhiji said, 'Literacy is not the end of education nor even the beginning. It is only one of the means whereby man and women can be educated. Literacy in itself is not education' and again 'we have upto now concentrated on stuffing children' minds with all kinds of information, without ever thinking of stimulating and developing them. Let us now cry a half and concentrate on educating the child properly through manual work, not as a side activity, but as the prime means of intellectual training. You have to train the boys in one occupation or another. Round this special occupation you will train up his mind, his body his handwriting, his artistic sense and so on'. This emphasis on an all round development of the personality of the child through the educative process got channelised into a rethinking about the quantity and quality of the knowledge of different subjects to be provided to the children and the technique of teaching. It was felt that most of the knowledge contents that the children were made to learn under the traditional approach of teaching each subject as a separate discipline was of doubtful value to the students as they never felt the necessity for its use in their life. What was still intrigueing was that no scope for the internalisation of the knowledge was provided in the educative process and therefore most of it was forgotten soon after the educative process was over.

Correlation as a technique of teaching was emphasised in Basic education to overcome these drawbacks. Stimulation of the learner and internalisation of the knowledge gained can be said to be the test of correlated teaching. Stimulation consists in the development of the desire in the learner to acquire knowledge and internationalisation means the acquisition of knowledge in such a way as to facilitate the use of it in the proper situation.

Stimulation, it may be noted is a very necessary condition of learning. In all good systems of education motivation is given a pivotal place. Play way technique, project method and Dalton method are all variants of this basic need of motivating children to learn. The technique of correlation lays great emphasis on motivation as it appeals to the natural drives and dispositions of young children. Psychologically speaking, the children can have little desire to learn the bookish material unless they are properly motivated by some impending need to acquire that knowledge. The emphasis in correlated teaching is therefore laid on making the children feel the need for the knowledge they are to be provided with and in the same analogy only such knowledge has to be provided to the children for which they feel the need mainly in the context of activities manual, social and cultural. Knowledge so grained becomes automatically internalised and comes handy to the children at the appropriate time. It may be noted that in such a situation, the distinctiveness of different subjects as separate disciplines gets lost and the whole learning appears to be one coherent thing. This establishment of relationship between knowledge of one kind and the other, is to be termed correlation provided the configuration is purposeful and natural. Far fetched linkage of one thing with the other cannot be termed correlation for the simple reason that it neither helps in motivation nor in internalisation of the knowledge.

Creative urge is basic in human nature. It may find vent in playfulness or it may lead one to do other type of work both socially acceptable and unacceptable. Correlated teaching takes help of this creative urge and utilises it for the educative process. Participation in craft work or in other community activities raises problems before a child which demand solutions from him. The correlated teaching rests on this urge and weaves the knowledge required around the activity in which the children participate. Correlated teaching has thus to have some centres for correlation. The centres of correlation available for the teachers are craft, social activities and Natural phenomena. Different situations arising out of these centres of correlation have to be utilised for making the children acquire necessary related knowledge of the different subjects.

As a technique of teaching, correlation is psychologically sound and has remained in different forms a part of all good systems of education. Yet in Basic education far greater emphasis is laid in teaching every thing in a correlated way and this is not always found to be possible. This leads to a consideration of two issues viz : (i) to teach only that much which can be correlated and (ii) to teach whatever is possible through correlation and take to other methods for teaching the rest of the subject content. Gandhiji favoured the first position. In course of time however the concept has got diluted. The limited knowledge of the vast majority of the teachers about different subjects and the non availability of suitable text books and reading materials are some of the arguments that are advanced against the first stand add generally the second position is accepted namely that correlation should be adopted as far as possible. This second stand is also favoured by the standing committee of Basic Education which find clear expression in the booklet, 'the concept of Basic Education'.

The reprints included in this volume contain different shades of opinion about these issues. For the convenience of the reader, the subject has been divided into four sections dealing with (a) the concept of correlation (b) Centres of correlation (c) Samples of correlated plans and finally (d) teaching of different subjects through correlation.

We shall feel amply rewarded if the material contained in this volume meets the requirements of our readers in so far as the clarification of the concept of correlation is concerned.

R.K. Gupta

CONTENTS

Page

Foreword iii

Introduction v

Part I—*Concept of Correlation*

1. Correlated teaching—some pre-requisites —*Salamatullah* 3
2. Work and Knowledge—Correlation —*Marjorie Sykes* 8
3. Teaching in the Correlated way —*H.B. Majumder* 15
4. Correlation—The need for Caution —*K.G. Saiyidain* 33
5. Psychological and Pedagogical Basis of Correlation —*Miss Panandikar* 41
6. **समवायी शिक्षण में परंपरित पद्धतियों का स्थान** —द्वारिका सिह 54
7. **बुनियादी शिक्षा में समवाय** —हरिहर आनन्द बोड़ाई 59
8. **एकाधिक कक्षा अध्यापन तथा समवाय** —मिलापचन्द्र दुबे 63
9. **समवायी शिक्षण सफल कैसे हो** —सत्यपाल रूहेला 69

Part II—*Centres of Correlation*

10. Teaching through environment in the Urban Basic Schools —*D.V. Chickermane* 75

11. Intellectual Background for correlated teaching some experiments 78
—*P.N. Samwal*
12. Local environment—A Source of Education 82
—*K.S. Acharlu*
13. Choosing centres of interest 89
—*P.N. Johnson*
14. Celebration in Basic Schools 95
—*S.P. Mankikar*
15. बुनियादी शिक्षा और सामाजिक परिवेश 99
—लक्ष्मीलाल के० ओड
16. बुनियादी शिक्षा में नियोजन : एक प्रयोग 107
—दीनदयाल दशोतर

Part III *Samples of correlated Plans*

17. Lesson planning in Basic schools 115
—*D.V. Chickermane*
18. One year of work 118
—*S. Rajam*
19. Week's teaching in Basic Training colleges 123
—*C.D. Indapurkar*
20. Necessity of following a prescribed syllabus of activities and correlated knowledge in Basic Schools 126
—*B.V. Ramaniah*
21. शाला में समवायी अध्यापन का आयोजन 129
—दीनदयाल दशोतर
22. नियोजन आधारित बुनियादी पाठ 135
—लक्ष्मीलाल के० ओड

Part IV. *Teaching of different subjects through Correlation*

23. Social activities and community life—the back bone of Basic Education 152
—*T. Paul Verghese*
24. Teaching of social studies in Basic Schools 157
—*R.C. Sharma*

25. Basic Science teaching in social perspective 165
—Sureshchandra Shukla
26. Teaching of Mathematics in Basic Schools 172
—Salamatullah
27. Classroom museums in Basic schools 181
—J.H. Singh
28. **सामुदायिक नृत्य : एक शैक्षणिक क्रिया** 184
—देवीलाल सामर
29. **सामाजिक अध्ययन में क्रिया कलाप : एक सुझाव** 190
—तुलसीमल सिह
30. **धार्मिक-सांस्कृतिक पर्व द्वारा समन्वित शिक्षण : एक प्रयोग** 197
—नरपतसिह चौहान
31. **अमरूद की काश्त और समवाय पाठ** 203
—रामकुमार चौधरी

PART I

CONCEPT OF CORRELATION

CORRELATED TEACHING
SOME PRE-REQUISITES

DR. SALAMATULLAH

Correlation is generally regarded as the greatest bug-bear in Basic education. The serious-minded academician objects to the very idea of correlation. For, he believes that this disturbs logical order of the subject matter, that knowledge thus acquired is incoherent and patchy, that learning does not lead to acquisition of any disciplinary value of a permanent character ; and so on. The light-hearted critic concentrates his fire at practical examples of correlation. He picks up the ridiculous ones from the actual class-room practice—and there is no dearth of such examples. Thereby he tries to show that the technique in itself is faulty. The short-sighted enthusiast advocates that correlation is the life-breath of all educative process, and that nothing can be effectively taught or learnt without making use of this technique. In such a state of affairs the ordinary teacher is naturally bewildered ; and in-so-far as the technique of correlation is concerned, he tends either to give it up as a hopeless job or tries to over-simplify it and claims anything that he does as correlated teaching.

Need for Clarification of the Concept

There is no doubt that this particular aspect of Basic education is very much confused and confusing. The situation becomes all the more grave, when it is believed that correlated teaching is the central pillar in the edifice of Basic education. The problem confronting all well-wishers of this system of education is, therefore, how to meet this situation. This would

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From E. T., iii (4) Oct. 1960

mean to make the concept of correlated teaching clear to all concerned and also to suggest lines along which this could be employed advantageously in educating children of the age-group for which Basic education is designed.

What is Correlated Teaching ?

Correlated teaching is one which seeks to interrelate the experiences that a learner acquires. Experiences thus gained become more meaningful. They are, therefore, functional and lasting. Isolated bits of information are not only hard to learn but very difficult to retain for a long time and still more difficult to use ; for, their significance is not fully understood by the learner. But if the interrelationships of the facts learnt are made clear to the learner, he grasps them more quickly and can retain them longer ; and what is more important he can put them to use as and when needed.

Moreover, probably the most important quality of teaching is that it must be stimulating. It is claimed that correlated teaching does stimulate children to learn. The reason advanced in support of this claim is that this method appeals to the natural drives and dispositions of young children.

In a true Basic school the above claim can surely be justified. For, there education is organised around activities—productive, creative, social, etc.—which children by nature love to engage in spontaneously. Nothing appeals to a child more than to use his limbs in activities he can perform. This provides free play to his imagination and opportunity to his self-expression—things so much needed for the development of his personality. The outcome of such an activity is a sense of achievement and a feeling of self-satisfaction, and these provide natural motivation for learning.

Correlated teaching in the Basic school may be interwoven with craft processes or based on activities and experiences concerning social and physical environment. An activity may fruitfully serve as a centre of correlation for various kinds of learning in two ways. First, acquisition of certain information or skill may infact be indispensable to carry out the activity itself. Second, some knowledge or understanding may emerge out of that activity, *i.e.* the activity may lead to some additional relevant learning. For instance, in making a tray of wood, the first pre-requisite is to know units of measurement of length, area and volume and to have the skill in measuring and calculating the quantity of wood needed for the purpose. One who proposes to make a tray must, therefore, learn these things. This activity might as well lead to learning some facts regarding the nature of wood, its chemistry, geographical facts about its produce, means of transport, its cost, the cost price of the finished product, etc. One could well imagine that these and similar other items of knowledge might emerge out of the project of making a tray. This would, undoubtedly, provide a genuine situation for teaching these things. This is correlated teaching.

Some Pre-requisites of Correlated Teaching

(1) As indicated above, the first pre-requisite of correlated teaching is that children must be engaged in some worthwhile activity. Activities may be varied. An activity may be productive like spinning and weaving, wood work, etc. It may be social like cleaning the class room, school and its surroundings, arranging a picnic party, excursion or field trip. It may be cultural as celebrating national days, staging plays, or organising music and dance performances, etc. Or the activity may concern health and physical development like participating in games and sports, intramural contests and tournaments, organising campaigns to fight out epidemics like malaria, cholera, etc., arranging for drinking water and mid-day meals etc.

What may be regarded as the most important thing in carrying on any activity is that it must be exploited to the maximum for educational ends. That is, it must stimulate thinking on the part of children. In order to achieve this objective, it is essential that firstly, children must feel a need for this ; secondly, they should be guided and helped to plan it in minutest details ; thirdly, they should try to execute the plan as far as possible. If at this stage it is felt that in order to accomplish the activity the plan needs some modification, it should be altered accordingly. The fourth and the last stage of the activity should consist in making an assessment of the whole procedure in terms of its adequacy for the end in view. Unless all these four stages are consciously gone through, the activity performed mechanically loses its educational purpose ; and it is not at all good for correlated teaching.

One thing that should always be kept in view while selecting an activity is the maturity level of children. An activity may have immense educational possibilities, but it may be beyond the scope of children of a particular age-group to do justice to it. In that case the activity is more likely to frustrate than to stimulate them. The writer has painfully observed such situations, when young children of eight or nine years were found simply mismanaging and spoiling the materials provided for activities like manufacture of Amrit Dhara, iron hangers, shoe polish etc.

(2) The information or correlated knowledge needed to carry on the activity must be integrally related to it and supplied at the appropriate moment, *i.e.* when the need for it arises. Similarly the lessons that follow a given activity must emerge naturally from out of the activity itself. For instance, while ginning cotton, if the children find some moth-eaten seeds, the teacher may appropriately introduce the topic *Life History of the Cotton Moth*. It would be correlated teaching in the right sense. But if the teacher attempts to teach *Life of Eskimos* by drawing similarity in colour of cotton and of snow, it would at best be called forced correlation. In fact, there is no correlation at all in this case. It is obviously ridiculous. Correlated teaching is meant to make learning meaningful. The relationship brought out in the first example, *viz*., the adverse effect of moth-eaten cotton on spinning and weaving, helps to proceed to a study of the moth—its life history in a natural way making the information thus gained significant. On the contrary in the second example the relationship sought to be pointed out *viz*. similarity in colour of cotton and of snow is only superficial. This does not help children to understand the life of Eskimos any better or to widen their mental horizon in any way.

Some-times an activity may serve primarily as a teaching aid rather than a centre of correlation. These two functions should not be confused. The writer has witnessed this kind of confusion prevailing in certain quarters, which ought to know better. An activity like making the bow and arrows, for instance, may be quite useful in teaching children the *Story* *of Eklavya.* But this cannot be regarded an example of correlated teaching.

(3) The materials to be correlated with an activity must be well graded. It is a common experience that almost the same subject matter is gone through by children of various grades in the Basic school over and over again irrespective of their mental maturity and the state of their previous experiences under the plea of correlated teaching. This tends to make the whole educative process unsystematic and chaotic and to lower the standard of education in Basic schools. The writer has seen the children ranging from grade I to V being taught the same lesson on *History of paper making* or *Paper Manufacturing Factories in India*, after they have done some work in paper-cutting and pasting or Cardboard Modelling. Similarly, the lossons on *Cotton Production in India* or *History of Textiles are* delivered indiscriminately to children of all grades. This is a disconcerting state of affairs, as it involves a scandulous waste of energy, time and material resources.

The situation pointed out above has stemmed mainly from the assumption that every teacher is competent enough to apply the principle of correlated teaching in relation to an activity, and to select the appropriate material for his day-to-day work. But what actually obtains belies this assumption. Grading of the material that can be correlated with various processes of a given craft or with any other activity in terms of its suitability for children of a particular age-group is a difficult task calling for imagination, technical knowledge and experience. What is to be done then ? The teacher needs definite guidance as to what material would be appropriate for a certain grade in relation to a particular craft process or given activity.

The problem of correlated teaching has only been tinkered at so far. We have been talking about it in a general way, as if any material connected with a centre of correlation were suitable for children of all grades. But in reality this is a part of a bigger problem, namely, the problem of curriculum development in Basic schools. Its solution demands systematic research and investigation. This is a legitimate task for teachers training colleges and institutes of educational research to take up in right earnest.

WORK AND KNOWLEDGE—CORRELATION

MARJORI SYKES

Correlation is commonly thought of as the special, distinctive technique of Basic education. This technique is conceived of as the art of linking up parts of the formal logically ordered syllabus of academic "subjects" with particular processes and activities in the pursuit of a craft. Thus measurement of area in the mathematics syllabus may be "correlated" with the lay out of a garden, or the calculation of the amount of cloth required for one's personal use. Similarly, other topics of mathematics or physics may be linked with the maintenance and repair of the *Charkha* ; some social studies (social history, economic geography) with the growing of basic crops such as cotton, sugarcane or wheat; topics in biology with the fertility of the soil, the development of various plant and the birds, insects etc. which help or hinder their proper growth.

Now all this is good. A large number of Indian schools still centre their teaching almost exclusively on books ; and they could very greatly increase its effectiveness by relating, what they teach, to real life, practical experience and field observation. But there is nothing *new or distinctive* about this approach. It is universally accepted as a principle of ordinary good education. All the Botany, I know, was taught to me by this method when I was a little girl at school, with no text book at all. The teachers got us to observe plants in the fields and on the roadsides, to bring wild flowers, species by species, to the classroom, dissect them ourselves with a common pin, and make out the diagrams of their structure. My father who was the Headmaster of a Village school, once sent a new assistant teacher who came from Canada. When he found out that she knew how to make fire by friction between two pieces

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From B.T., iii (4) Oct. 1960

of wood, he was delighted. She soon taught this ancient art to the boys ; and then, under my father's guidance, the children made their own "fire book". This contained some of the great steps in the Science and teachnology of fire making, but it also contained much more. The children's own experience of the wonder and preciousness of fire led them to appreciate some of the ancient myths of man, some of this great literature and the part fire has played in his worship.

That sort of correlation was good in education then ; it is good now ; the wise have always seen it to be good. It is a measure of the poverty of Indian education that it is so tragically rare in our schools. But it is not *new* ; it is not a distinctive feature of *Nai Talim* ; and it is only a part ; and a secondary part of what correlation in Nai Talim means. To say this is not to belittle techniques. Techniques are important ; we all need to welcome and practice better methods of carrying out our work. But the concept of correlation in Nai Talim goes deeper than method. It challenges our basic ideas about the nature of Knowledge and the function of work in education.

Misunderstandings may have been fostered to some extent by the English word *correlation* itself. The prefix *co* (as in *Co*–ordination, *Co*—operation etc.) suggests that work and knowledge are two different, separate entities which have to be brought together into relationship with one another. Most of our teachers find this suggestion only too natural. We are conditioned to think of knowledge in terms of prescribed syllabuses, text books and written examinations. Crafts, if they have any place in school at all come in the category of hobbies or "extra-curricular" activities. We therefore conceive correlation as the link between these two aspects of school learning, at least one of which is static, and consists of the information and skills demanded by a previously fixed academic examination. That this is the attitude of many teachers is revealed by the doubts and criticisms which they raise ; "correlation" won't work, they say ; because it is not possible to "cover" every topic of the static syllabus in correlation with this or that basic craft.

Such critics blame correlation for failing to do what it was never intended to do. It would be wrong and unreasonable to expect teachers to *accept* this principle of *Nai Talim* without full consideration ; but it is surely not unreasonable to expect them to understand what the principle *is* before trying to evaluate it. It might help if, instead of talking of "correlating" work and knowledge we used the word "integrate" ; that would emphasize the *unity* of work, knowledge process. But in the end we shall only find the right words by thinking in the right way and to do that we should begin by going back to the principles enunciated by Gandhi and Vinoba, the pioneers of *Nai Talim*, and understanding what they mean by work and by "knowledge".

Mahatma Gandhi said : "I believe that the highest development of the mind and spirit is possible through such an education (an education in a craft) provided only that the craft is taught not mechanically but scientifically, that is with an understanding of the why and wherefore of every process".

Vinoba said : "True work and true knowledge are one as the lay and the pot are one ; correlation is the relationship between the clay and the pot. Just as there can be no pot without clay so with one sole exception there can be no true knowledge without work" (The exception is the knowledge of one's own identity or self-hood).

Gandhi and Vinoba do not equate knowledge with "covering" a syllabus ; when they think of mental and spiritual development, they do not mean passing examinations. Now there *is* a place, in sound education for a syllabus of work ; there *is* a place for objective tests of achievement. But evil creeps in when these things are standardised and made rigid, and imposed on *all* schools and children without regard to varying situations and varying individual needs. If education is to be alive, there should be no such thing as a rigid, imposed syllabus ; every school staff ought to be free to work out their own, syllabus and the purpose of any general syllabus ought to be simply to *help* them to do this, by giving suggestions, out of a wider experience, about the kind of knowledge which has been found to be generally useful. One of the deep spiritual purposes of education is to invigorate the growing mind and set it free. This task can never be undertaken by teachers whose own minds are fettered by rigid plans of study imposed on them from outside.

Nai Talim, Basic education, is free education. It is useless to expect it to reveal its potentialities if it is imprisoned in regulations about the exact books to be read, or hours to be spent, on every "subject"; it is useless to expect genuine correlation between work and knowledge if the items of "knowledge" to be acquired are listed and standardised before-hand with no reference to the many different kinds of work that may be done or the infinite variety of children who may do it. Both real work and real knowledge can be planned for in a responsible way before-hand ; but neither can be standardised to a set pattern.

This wrong conception of "knowledge" as something external and static, also leads to a view of correlation in which the value of "work" is measured merely by its effectiveness in helping the pupils to absorb "knowledge". In this view, "knolewledge" is central and primary; "work" is only a means to an end, it is subordinate and secondary. When Mahatma Gandhi first published his scheme of Basic education, critics were quick to issue warnings that work must not be organised *merely* to earn income, with no regard to its intrinsic value for the personal development of the child. The warnings were right in themselves, but unnecessary; there was never any real danger that Basic schools would become sweated labour factories. The real danger is that work should be reduced to the level of an "aid" to the learning of static packages of prescribed information, which are regarded as the real business of the school. Hardly anyone, except Vinoba, raises his voice to warn us against *that* danger. Yet if we succumb to it, our "Basic" schools will only get the *worst* of both worlds : bad work plus low standards of knowledge.

Work is of two-fold importance in human life; to supply the basic needs of civilised existence (earn income) *and* to enrich man intellectually, morally and spiritually by the manifold experiences and challenges with which it confronts him. Our danger is that we do not take it seriously in either of these inter-related aspects. Work *must* be real and serious if it is to have educational value. Gandhi's famous dictum that productive efficiency (self-sufficiency) is the "acid test" of Basic education does not mean that economic earnings are the *only* important consideration. It means what it says : that economic efficiency is the measuring-rod by which the effectiveness of the work as a means of physical, intellectual and spiritual development may be gauged. Work must, of course, be suited to the age and interests of the child, but it must be neither trivial nor artificial. Only work which is worth doing for its own sake can supply the raw material for that natural, integrated development of bodily skills, intellectual understanding, strength and harmony of character, which is what we mean by "correlation".

There is no difficulty here for the child. For him, it is obvious that the reason for growing a banana tree is to acquire bananas, not botany. The Botany, and the many other intellectual and spiritual experiences which may be derived from growing a banana tree, are bye-products. To call them bye-products is no disparagement; it simply means that (like many of the best things in human experience) they are not best secured by aiming at them directly. Growth in knowledge and wisdom are important bye-products of work which is undertaken, intelligently and purposefully, for its own intrinsic, immediately satisfying ends.

I have just been thinking over what I have learnt, during the last four months, in the course of growing a crop of potatoes. If I could have had a group of teachers and children working with me, what fun we should have had; and how well one could have shown the teachers what integrated ("correlated") knowledge means ! Here are some notes on the experience, and the questions I asked myself as I worked.

April, first part : Preparing the land—a newly-cut terraced hill side, previously uncultivated. Note variations in quality of soil shown by vigour or lack of vigour in growth of weeds. Very little topsoil or humus, no earthworms. Remedy ?

Large number of stones to be removed. Hard work, good training in physical endurance, also in physical skill. Can one throw a stone, judging weight and distance, so as to fall accurately on the stone-heap one is collecting ? Disposal of surplus stones—building a low, stable, wall at end of terrace. Two kinds of stone : hard granite, soft rock half-disintegrated.

Variation in size of terraces—narrow surface, high banks; wider surface, lower banks. Measure variations in overall gradient. Administrative restrictions on cultivation of steep gradients—what and why ? Study of terrace contouring and surface drainage. Any danger of soil erosion ? How to stop it ? (plan action at proper season).

April, second part : Area to be planted ? How much compost is needed ? How much available ? Observed earthworms present in compost—why ? Local standard weight and prices of seed. How many seed potatoes of type used, to lb. ? Pounds to acre ? Spacing of seed in local practice, compared with text-book instructions.

Not enough compost available. Plan to increase supply for next season. What value of raw material will give required volume of compost ? What available materials will supply elements of nutrition needed ? Discover local practice, consult books.

May : Germination—after how many days. Comparison of beds with and without compost for speed of germination and growth.

Growth of weeds; which seeds present in soil, which in compost ? At what stage sowed weeds be uprooted and plants earthed up ? Study of methods of seed-dispersal and propagation of common weeds with a view to control.

Growth of useful plants (tomato, mustard) from viable seeds in compost. Concept of viability. Should such plants be removed from potato beds ? Which can be transplanted without injury ? Why ?

June : Regular scrutiny of crop for signs of disease. Diseased leaves, consult local Agriculture Demonstrator. How to dispose of diseased plants to prevent spread of virus infection ?

Observe local practice of interplanting potatoes and beans. Method ? Advantages ? Plan for future controlled experiment—crop with and without beans. Conditions of a scientifically "controlled" experiment ?

July : Harvesting. When is crop ready for harvest ? Weighing—percentage increase; grading, drying, storing. Should one keep one's own seed or obtain from outside? Why ? Marketing conditions : subsistence and commercial farming. What *to plant* next in this ground and why ? Local crop rotation schedules.

We learned much. On the basis of this experience we could draw up, with some confidence, an integrated *outline* plan for work-cum-knowledge-cum-social experience which might be helpful and suggestive for schools with a field or a garden. But we certainly could not make any rigid, day-by-day "syllabus" which would fit the needs of any and every school down to the last detail. We could suggest the *kind* of books which ought to be available for reading and reference, in seeking answers to the questions stimulated by the work; but we could not write a "text-book" with logically, ordered "lessons" to which our twelve or fourteen-weeks' programme of field-work must be fitted in. And we certainly could not guarantee that any four-months' work with the same crop in the same field would follow exactly the same pattern, or raise the same problems, as the programme I have described. Real life is not so mechanical and not so dull. It is full of the unexpected, it is forward looking, it grows. Real correlation too is like that; it is not a dead system. but a living adventure.

TEACHING IN THE CORRELATED WAY

H. B. MAJUMDAR

The method of Basic Education[1] is Correlated Teaching. Is this to be considered as the only method in our Basic schools? Is this method based on scientific principles of learning and teaching? How far can it be applied under class-room situations? Is there any place for formalised instruction in Basic Schools? These questions are often asked by parents, educationists and even by lay people? The purpose of this paper is to answer these questions, to indicate the principles involved and to analyse advantages and limitations of this method.

Any method in education points out the path along which to travel so as to reach the educational goals. It helps the learner in 'living, learning and becoming'. In other words, the method realises or tends to realise the curricular objectives changes in human beings. It is, therefore, easy to assume that the Method of Basic Education is to be so determined as to realise the objectives of Basic Education.

What are the objectives of Basic Education? Its objectives as well as the principles and its method are inherent in its definition. Basic Education is defined as "education for life and through life". Thus, it will appear the objectives and method are highly functional. This education is concerned with modifying behaviour and bringing about certain changes in the human being, so that eventually he develops into an integrated and balanced personality and gradually adjusts himself along with his total development, to a society which is based on truth, justice and non-violence. This education then not only aims at developing an integral man but also aims at changing the society of which the individual is a citizen. With these objectives in view the method of Basic education is to be so designed as to consist of many interpersonal and social actions, interactions and experiences, which life faces in its environment. All that makes up life and living constitutes curriculum of Basic Education and the very act of living, discovering new ways of living better lives in a 'better' society is its method. A life is always sustained in a particular environment-social and physical. There are continuous actions and interactions going on as life is lived, as an organism develops in the environment. These actions and interactions are therefore media of growth. In order to hold ourselves on to our environment, we must have to do some basic crafts, which are very fundamental to life. These basic crafts give us our food, clothing and shelter. The basic crafts should, therefore, form the core of living and for that matter the core of education, because life and education are inseparable. Craft connotes activity. Living in an environment and evolving a better society involve activities. The method of Basic Education therefore is Activity Method. The Activity Method again connotes undifferentiated and integrated currriculum which is continuously being built upon the solid rock of children's experiences and natural relationships which cohese different subject areas and bind different aspects of life into indivisible whole.

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[1] Basic Education, which is defined as "Education for life and through life" caters for age group 6-14.

—Originally published as a brochure from the Deptt.

Before entering into a further discussion of principles let us at this stage imagine that we are visiting a rural Basic school, which is an eight-class school catering for boys and girls of 6-14 years of age. We shall thereafter deduce the principles and examine them in the light of what we see there.

The morning bell goes and with the bell, and probably a little earlier, a boy opens the school store and distributes to children appliances which they need to start their 'school community' activities according to the pre-planned programme of 'duties' and responsibilities' assigned to them by their elected leaders. If they forget, they check up from the duty list entitled "Our jobs", which has been hung up at a conspicuous place. As we move along we will notice, different groups of youngsters have engaged themselves in different units of work. Some are cleaning up the classrooms, some taking care of the school house and its surrounding and dusting doors and windows. The flower and vegetable gardens need care and therefore a few pupils are at their jobs there. We will also find some busy young folk arranging the Nature Corner. Some are again engaged in editing the news of the day to be read before the school assembly. A group of children may be found drawing pictures for the News Bulletin, or designing borders for the same. Some again are looking after the school poultry, while others are making a compost pit for conserving the sweepings for utilisation as manure. A group of youngsters is busy arranging the flower vases. Another group is probably looking after the Head Mistress's office. The school cooperative store is also open now and is selling pencils, paper, cotton, etc. This is also managed by children themselves. A batch of grown up girls and also a few boys are busy in making some tiffin for the midday meals for all children of the school, with the garden produce according to some pre-planned menu. We may also notice as we look round a few pupils are not participating in the so-called community activities right at this moment, but are busy with some books at their library corner. Where are the teachers ? They are also busy with groups of children and are participating in the community activities along with the children. In other words, the school is a community of busy people engaged in some purposeful work either for themselves or for their own school.

These community activities which may take fifteen minutes or so are now over. The children will now wash their hands and feet and join a community prayer, where some non-denominational devotional song will be sung in chorus. They will pray not only for themselves, but for all children of the world. This is followed by inspirational readings from various scriptures or books on morals. There will be a few announcements after this either by the Head mistress, or by other teachers or by children. The news paper which was edited earlier will now be read by the boy or girl in charge and other children will be allowed some time to tell their own news. Having done that they will then proceed, we will notice, in an orderly manner, led by respective class leaders, to their own class-rooms. Some classes are of course held outside under the shades of trees.

Let us now follow the children to their classes and see what is happening there. As we pass along, we shall be immediately struck by the entirely informal atmosphere, homeyness, beauty and system prevailing in the class-rooms where pupils and teachers are working 'together'. There is no back-to-back seating arrangement. In some classes children have sat in groups and are engaged on group activities and in others again children are pursuing individual projects. The class-rooms will appear as child-sized work rooms full of equipment, charts, work-plans, reference book. works records, maps drawn by children, models also made by them and a number of pictures which reveal imagination and free and creative outlets of the children. The class-room as we notice, is an active and creative atmosphere where children are living and learning and sharing experiences with joy and happiness, so vital for their mental bealth and development.

As we move along we may notice that in one class-room one or two children are checking up cleanliness of nails, teeth and hair of other children, while others are finding out their own heights and weights and recording the same in their class record books and are incidentally trying to make a comparative estimate of their physical growth. We may notice that a class is discussing some important news of the community or the news they heard a few moments ago in the school assembly. In another class probably a class conference is going on and boys and girls are evaluating their previous day's work under guidance of the teacher so that they can effectively plan further development of the work. In another class, we might notice, pupils are busy finding out why the leaves of plants in their garden are drying up even though they watered the plants at regular intervals. An upper class again is busy preparing a plan for a rural survey in connection with the community welfare work which they have been invited by the community itself to take up. In the weaving class some pupils are busy at the looms, while others are finding out at what rate they should speed up their work in order to produce, within the stipulated time the cloth which has been requisitioned by the Head Mistress for making uniforms for the school football team. In another class we may observe that the teacher is leading a class to find out what materials and how much money the pupils need for binding the damaged books of their class library.

As we pass along and eventually complete our short tour of the class-rooms, we may ask ourselves, why does not the teacher teach in the traditional way ? Why does he not take recourse to mass instruction asking children to listen all the time to what he says ? These questions lead us to fundamentals of 'why' 'what' and 'how' of Basic Education. The organisation of teaching and learning activities in this school rests basically on a philosophy that teaching is not a pouring in process, it is developing from within; it is helping children in achieving self-directed growth in all directions; it consists in helping them in becoming self-reliant in matters of education through work and experience, in living and let living, living a full, happy and satisfying life.

If we classify the activities in which the children are individually and collectively engaged we shall notice that some of the activities relate to community living while others are class-room activities carried out collectively or individually. These are either intellectual, manual or intellectual-manual activities and can be classified as :

(1) Activities which promote individual and community health, cleanlinesss and sanitation.

(2) Activities which promote intellectual development, problem solving, intellectual skills and knowledge understandings and attitudes, belonging to different subject areas.

(3) Activities which develop citizenship, e.g. practice in self government, cooperative and democratic living. self help practices, organisation of and participation in community life activities of the school and also of the life around the school and in organising various types of social service programmes for the community outside the school.

(4) Activities which develop productive efficiency of the individual through craft work.

(5) Activities which develop the feeling aspect of the mind, viz., appreciation of art, music, rhythm, kindness and the like.

In other words, children are being educated through an integrated curriculum built up by the productive and creative experiences of the children so that they may develop into integrated personalities—socially, emotionally, intellectually and eventually become citizens of a better society. May we then say that silently and slowly, consciously or unconsciously the children are building up a social order in which there are no distinctions between class and mass, between caste and creed and where manual work has been given a distinctive value and a definite culture has been attached to it ?

Such a concept of purposeful creative and active learning is based on scientific principles. Educational philosophers and great teachers of the world have always stressed the value and importance of doing for vital and effective learning. They have condemned verbalism in the education of young children. Aristotle, for example, pleaded that a proper understanding and appreciation of music comes only when the learner himself practises it. Comenius urged that impression must be insured by expression and 'what has to be done, must be learned by doing'. Pestalozzi condemned 'the wordy system of teaching', which suits neither 'the faculties of the child' nor 'the circumstances of life'. Psychological findings reveal that maximum and effective learning takes place through purposeful self-activity of children, which involves problem solving and that maximum learning also takes place when educational programme is designed to meet the developmental needs of the children and when it follows the pattern of his growth along desirable lines. Self-activity, as we all know, is determined by child's interests and purposes, sustained by his power and carried to successful attainment of a goal in an atmosphere of freedom and in the absence of unnecessary imposition. In Basic Education, teacher's method is so designed as to help child develop through his own efforts and his own real experiences, whether it be in skill or knowledge in social feeling or spiritual awareness. There is of course imposition, but it is used very judiciously. Whenever teacher imposes, his own ideas or thoughts or beliefs, he does so with caution so that he gets maximum pupil participation. In other words, he motivates and then imposes. Furthermore, the teacher treats the child as a 'dynamic whole' as an organism rather than an automation and allows the child to unfold, to grow and to develop in free interaction with his craft activities, community activities and also with his social and physical environment at large. Child's interests and drives, which are considered to be the motive forces of activity, are the starting points in Basic schools, and yet new interests are created by presenting a congenial environment. The Basic school teacher always attempts to relate his teaching media to the basic interests, to arouse interest, to help children pursue them and to sustain them so that they learn as they work with utmost satisfaction and with goal seeking experiences. In Basic Schools, learning centres round work, projects, problems and experiences meaningful to children. Human personality is the integrated whole of knowledge, feeling and action. These aspects of human behaviour are inseparable and they work in unity and are vitally dependent on each other. The Basic school teacher therefore lays great emphasis on education of the 'whole personality' through a 'total education' programme.

In Basic Education the purposeful activity of children is so directed that it should be productive. Purposeful activity, in a sense, is always productive, for a purpose is always born out of a felt need. Young people are always anxious to make things and if the things they make have some practical value their interest is sharpened. As the children are engaged in craft work, they try, according to their individual capacities and interest, to do the work thoroughly and efficiently. They solve the problems associated with the work and 'discover' why and wherefore of the crafts, they find out the scientific, mathematical, social, economic and cultural principles and values inter-related with the crafts. Are they attempting to become intelligent craftsmen as they learn the crafts? Yes, But that is not all. The craft which holds a unique position in the world of work, not only equips them for the world of work, but at the same time educates them and builds up their culture and the scientific mind so much needed in today's society. On this point let the Zakir Hussain Committee be quoted :

"Psychologically, it (productive work) is desirable, because it relieves the child from the tyranny of a purely academic and theoretical instruction against which its active nature is always making a healthy protest. It balances the intellectual and practical elements of experience, and may be made an instrument of educating the body and the mind in coordination.

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The child acquires not the superficial literacy which implies, often without warrant, a capacity to read the printed page, but the far more important capacity of using the hand and intelligence for some constructive purpose. This, if we may be permitted to use the expression, is the literacy of the whole personality.

"Socially considered, the introduction of such practical productive work in education, to be participated in by all the children of the nation, will tend to break down the existing barriers of prejudice between manual and intellectual workers, harmful alike for both. It will also cultivate in the only possible way a true sense of the dignity of labour and of human solidarity—an ethical and moral gain of incalculable significance.

"Economically considered, if the scheme is carried out intelligently and efficiently, it will increase the productive capacity of our workers and also enable them to utilise their leisure advantageously.

"From the strictly educational point of view, greater concreteness and reality can be given to the knowledge acquired by children by making some significant craft the basis of education. Knowledge will thus become related to life, and its various aspects will be correlated with one another."[2]

Craft has a legitimate place in education, it is not to be considered as something 'extra' as is the practice in many schools. The school subjects are to be integrated with the craft. Which involves not only doing, but also problem solving, thinking and judgment, intellectual skills and understandings, planning, designing, creating, appreciating the beauty and design of the finished product and identifying with the lives of those people of the society who live on crafts. Crafts will help the children to acquire sensory-motor coordination and to appreciate the value of honest labour. They give children the joy of creation, the confidence and self-respect associated with the idea of having achieved something which is socially useful.

The Method of Basic Education is the method of correlation. All knowledge is to be related with crafts, creative activities, community life activities, social and physical environment of the child. A system of education which aims at integral development cannot adopt a method which treats knowledge in artificial compartments of subject areas, which fails to find out and establish relationships and which provides no opportunity for interactions and integration of experiences into a unified whole. Learning involves nervous system and we know that no one part of nervous system acts by itself, there is no completely isolated sensation on thought. This idea is supported by Gestalt psychology. Learning which results due to change of behaviour of the total individual is an integrated act and is effective in proportion to the degree of relationship that any one element of learning has to other elements and to one's total experiences."[3]

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[2] Ministry of Education, Government of India, *Handbook for teachers of Basic Schools,* p. 18.

"An integrated programme of learning would make use of the child's needs, of meaningful situations, of the inter-relation of learning with real experience."[4] This suggests "things should be taught in relation and not in isolation". Such relationship is sought through a unit of activity. The child through activity learns human relations. The things he learns have permanence, because they are erected upon the rock of solid experience and are tied together by many bonds.

A craft can be divided into various units of work and is therefore capable of various experiences which can build human relationships which Basic Education aims at. Correlated teaching, which takes into account those kinds of activities in which children achieve knowledge and skill in relation to their use in some purposed or planned activity and in meaningful whole, as contrasted with the learning of facts or skill in isolation and without reference to their practical use, will arouse greater interest and enthusiasm because the technique gives teaching and learning a relevance born out of practical and living need and purpose.

But by correlated teaching in Basic Education is not meant "a rather loose connecting up of traditional subjects" such as telling the class, about 'history' of the invention of Steam engine and of the 'geography' of the place it was invented, at the same time when one teaches 'Science' of Steam engine. It does not mean that all 'Subjects' in the course of studies must be related to the craft, or to the unit of work in hand. The work in hand must involve a problem. This problem creates a need, an urge which supply the drive for solving it. Children have to recall their past experiences, analyse them, and use them to discover new experiences. It is a heuristic approach helping children to be continuously on the look out for new ideas, new experiences and new attitudes and values. The units of work in Basic Education must therefore involve thought and action and integrated learning outcomes. They are never to be mechanically pursued.

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[3] Washburne, C. *A Living Philosophy of Education*, The John Day Co., N. Y., p. 274.

[4] Washburne, C. op. cit. p. 275.

Let us cite an example. Let us assume that on the Independence Day anniversary upper class students have decided that they will hoist the national flag made by themselves. They take the full responsibility and teachers have also given their approval. An upper class has taken the responsibility of making the flag. The class will now sit in several conferences to decide several questions and problems which are associated with the undertaking. They will co-operatively solve questions like: What will be the size of the flag? What are the details in its design? How much yarn will be required to weave the necessary cloth? What colours are to be procured? How to dye the woven cloth? How much time will be required to spin the required yardage of yarn? Who will weave it? In other words in order to complete the work they must have an efficient plan. The teacher helps them in their plan. The class divides itself into fact finding groups and work groups. Teacher guides each group, gives group lessons or class lessons according to felt need and provides resource materials. For collecting facts about the flag a group has gone to the library and will report back to the entire class the details the group has known from the books. Another group will find out the average speed of the individual child in spinning from the Daily Production Register and will determine what amount of yarn will have to be produced every day in order to produce the requisite yarn within the stipulated time. They will have to experiment with different dye stuffs in order to get the right dye or will have to write to a firm requesting to supply the dye stuffs. They will have to evaluate the work records of their fellow students in order to find out a group of their fellow students who can finish weaving of the required cloth within the specified period. In this manner, this unit of work offers many problem situations in different subject areas through the successful solution of which with the help of intellectual manual processes, children plan and execute their undertakings. As they proceed, they keep records of progress of work quantitatively and qualitatively, check them occasionally, hold class and group conferences and speed up their work, if need be. And finally they derive emotional satisfaction out of successful completion of their enterprise.

The question may be asked: 'Has learning taken place in such a situation?' In order to answer this question we have to be a little specific about what learning means. Modern educators are of the opinion that a curriculum must meet the developmental needs of children and should therefore provide experiences that (1) are life centred and that help deal with problems in the complex and changing society in which children live ; (2) take into account the needs, interests, purposes, ability and maturity of a particular group of children and at the same time provide for individual differences which exist in the group ; (3) have meaning and significance to the learner in terms of his goals ; (4) provide for the total development of children—their emotional, social. physical as well as intellectual development ; and (5) permit children to live democratically so that they develop the attitudes and competencies needed by effective democratic citizens. Keeping the above factors in mind a modern teacher adopts such teaching techniques as would modify or change the behaviour of the children instead of transmitting 'culture' and adding information to their fund of facts already accumulated second hand, hoping that they will remember them for use as needed at a later date. The modern teacher, accordingly, has to base his teaching technique on scientific findings and therefore believes that learning is a complicated process in which the child responds to a total situation, physically, intellectually, socially and emotionally as a total organism. The learner must be allowed to interact with his environment through doing and experiencing. The change that takes place in the individual as a result of the experience is 'learning'. Another characteristic of learning is reorganisation of experiences. In this particular case we will notice that children have utilised their past experiences, have stabilized and consolidated them through purposeful repetition and with the help of new stimuli have applied them to gather new experiences and ultimately have organised them into a meaningful pattern. That is, an integration of thought, action and end product has taken place. The whole process has brought about certain changes in their total personalities, has given them new ideas, new knowledges, attitudes and interests and has taught them to make functional use of their previous experiences, has encouraged self-study, has helped interpersonal and inter-group adjustments and has thus helped in their integrated development. Correlation in Basic Education then does not merely aim at correlating information, skills and knowledge about different subjects, but aims at the same time at correlating all that makes good life, correlates all that fosters integrated growth and also those forces and factors which contribute towards the bettering of a society. The Method of Basic Education pursues child's purpose, creates desire to learn, helps to achieve a goal, overcome obstacles and resolve tension. In this particular instance, there was a goal, its successful realisation, therefore, resulted in learning. Here we notice that the learners responded to a total situation. The relationships existing amongst the different aspects of the total situation were discovered by the pupils, they were learned by wholes much better than by learning in isolated situations. Fragmented learning is difficult. Isolated facts are soon forgotten.

Let us now focus our attention on certain criticisms of the Method of Basic Education and formulate some guidelines for the consideration of teachers.

First, Does the method take into consideration childs' interests and his developmental needs when teaching and learning are planned to centre round the crafts ?

The method, it was pointed out earlier, follows child's interest and purpose. Although it is quite likely that all the children may not be interested at the same time in the same activity involved in the craft and therefore cannot be adequately stimulated to thought and development, the teacher by virtue of his understanding of children and by virtue of his experience can decide what types of stimulus may elicit interest on the part of the children. It is quite possible for the teacher to simulate children to action, mental or manual, and lead them to participate in one or other phases of the craft. Then again, it is to be remembered that craft is not the only centre of correlation. Through pictures, books, trips, talks, discussions, charts, models, films, film-strips and various other audio-visual media, it is possible for the teacher to provide for stimuli to arouse children's interest in one or other aspect of the social and physical environment which offers many and diversified units for integrated study. Furthermore, skill in craft work is bound to vary from child to child and consequently, therefore, instruction will have to be adapted to individual needs.

Secondly, Is it possible to correlate all the school subjects with crafts ?

The obvious answer is no. The Method of Basic Education involves problem solving and it is therefore likely that all topics of the school subjects will not naturally correlate with the unit of work in hand. As for instance referring back to our project on the Flag we may ask ourselves if we shall teach history of the Indian National Flag and also of the other flags of world's nations. This will be a far-fetched and unreal correlation. This knowledge of history does not fulfil any immediate purpose or need. In wood work for instance, geography of wood, while selecting particular timber for a particular piece of furniture that children intend to make, will also be an artificial correlation. It has been noticed that teachers are always anxious to apply the principle of 'multilateral' correlation, i.e. to relate all subjects of the curriculum to the major activity or unit of work or study, even though there is no cause and effect or other natural relationship. This leads to misapplication of integration. Integration of experiences in such a situation is in relation to subjects and activities instead of the learner's personality. Teachers forget that it is learning that must be integrated with child's own life and experience and not craft integrated with arithmetic, history, geography, science, language and so on. The Method of Basic Education is really 'colateral' correlation. It consists in discovering relationships in order to solve problems. This type of correlation at one stage involves one subject, at another more than one subject and does really do away with artificial subjects barrier. Superficial correlation is utterly unnecessary; some one experience need not be the basis of all school learning at a given time. The importance of the Basic Method lies in relating each unit of learning to the child's experience and sense of need. This is in complete agreement with what washburne says :[5]

"Inter connection and association should be as rich as possible. But artificial connection, the dragging in of subject matter, forced correlation, are just as bad in their own way as are artificial subject matter boundaries. The essential point is that each thing the child studies shall be an integral part of his needs and be assimilated by him in his action and his thought shall become a part of his life."

All these, therefore, suggest that the Basic school curriculum which centres round the life of the child and also on the needs of a new social order, and for that purpose, on the crafts and environment of the child is an emerging curriculum—a curriculum which is built up day by day by the child through his own activities and experiences. If that be so, what is the place of 3 R's in the curriculum ? Should we not have organised syllabi in these subjects for the Basic Schools ? How are they going to be treated in the class rooms ? Should not the children know all facts about the tools, equipments, raw materials which the children use as they work on a craft even though they may not relate immediately to the problems in the job at hand ?

Surely, there is need for languages, mathematics, science and history for their own cultural and disciplinary values. In our traditional methods we have over-emphasised these values and neglected the functional aspect of learning, we have not related our knowledge to our developmental needs and needs of the society. Nor do we organise our teaching and learning as experiences. Every human being needs skill in 3 R's. But the 3 R's are most effectively learnt with understanding and with application to life. The fact of history, geography and science are learned as necessary parts of the study of how human being live and have lived together and how each one of us fits into the total picture. In teaching 3 R's psychological method of using children's experience and recognition of need is applied. Process is really and effectively learnt when it is understood and the understanding is to be based on experience and felt need. We may, therefore, conclude by saying that we shall certainly teach 3 R's and other school subjects, but the learning situations will mainly arise out of felt need arising out of problem solving related to crafts or other units of work or study in the areas of community living and understanding. Children will be led to see the worthwhileness of acquiring skills in the four fundamental principles of arithmetic for example. They will be guided to see that skill in arithmetic or in writing helps in solving problems quickly and efficiently and that it is worthwhile to know all about things the children handle, see or use. But while organising the curriculum in such a manner, we as teachers must take into account the level of maturity and children's readiness to accept new knowledge and skills. We must also remember that all children, however homogeneously we group them, cannot have the same degree of readiness, the same stage of maturity to learn a skill. This principle requires that in helping children in the acquisition of skills particularly in the lower grades of Basic schools, we must have to adopt individualized techniques or group methods of instruction.

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[5] Washburne, C. op. cit. p. 281.

Thirdly, Why should the method of Basic Education insist on productive efficiency ? It is not imposition of adult standard of values and pushing the child into a feature of adult struggle and worry too early ? Basic Education requires that purposeful activity of children should also be productive. We all know that where there is a purpose, the end result of the work is always productive. In Basic Education, which is claimed to be life centred education, children should make common articles of daily use and the sale-proceeds of such articles should help to meet a substantial portion of cost of the school. We wish children to grow and develop in an atmosphere of innocence, freedom and spontaneous play, and cannot but look askance at any scheme of their education which may lead to enforced labour, fatigue and money making. In reply to this criticism, it may be said in the first place that there is nothing wrong in earning and saving money in the honest way for their own school. It is part of life. Money value gives reality to the craft work. The contribution made by children towards the upkeep of the school gives them self-satisfaction, confidence and self-respect and above all a sense of pride, so essential in the development of personality. "Children must have opportunities for success and appreciation based on positive and productive achievement."[6] Then again, if productive aspect of the craft is not taken into consideration and it is considered as only a means to an end and not an end in itself, there is every likelihood of teaching the subject in a rather perfunctory manner. If we intend to utilise the craft as a medium for inculcating a new mentality and a new social and practical outlook in our children, we must have to treat the subject systematically. If a craft is taught systematically and educationally, it will lead to socially useful and saleable products and will surely lead to good education, because all work intelligently and systematically completed results in good personality development and therefore in good education. If the teacher, understanding the needs and interest of children, can provide sufficient play motive for the child to throw himself into craft work with the same enthusiasm, zest and interest as he displays in play, there is no real danger that craft work will degenerate into drudgery.

In the perspective of the above discussions let us now draw a few guide lines for determining methods in Basic Schools.

1. The Basic School is to be organised as a democratic institution, with respect for the rights, the opinions and the differences of the children. Cooperative planning and work should be made the core of the daily activities. Children will be helped to practise cooperative and democratic living right from the lowest class according to their capacities.

2. The teacher while designing his method will consider how to adjust educational experience of children to the different abilities of children, how to involve children in their own educational process more actively and how to make class-room practices more interesting, vital and life-like.

3. The teacher will plan cooperatively with children so that they feel free to communicate with one another and also with the teacher and also democratically exchange ideas, opinions

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[6] Lindgren, H.C. Educational Psychology in the classroom. John wiley & Sons. Inc. N.Y. 1956, p. 217

and feelings, cooperatively solve problems, pool ideas for common good and evaluate outcomes.

4. The method in Basic Schools should consist of the following steps :

(a) Stimulation of children's interest, helping them to recognize a problem in the work at hand and creating a desire for solving it and taking decision.

(b) Planning how to study or solve the problem and formulating a tentative hypothesis.

(c) Executing the work in hand. Actual gathering of data, performance of the activity, recording, organising, verifying and interpreting the data and finally forming and applying conclusions.

(d) and finally evaluation of the work done : Teacher's business is to help planning, give guidance at times of difficulties, provide materials and help in evaluation. He will utilise certain situations as work proceeds, in which he may have to give individual, group or class lessons. Teacher's main responsibility is to synthesise children's experiences. This can be done through group conferences and presentation of reports and through class lessons. One of the main criticisms against the Basic method is that teaching is unsystematic and unorganised. This shortcoming can be overcome if the teacher takes sufficient care in order to synthesise the experiences of children with the help of methods suggested above.

5. There should be flexibility in the time-table of the class. Any method which takes into account children's self-activity and freedom cannot have rigid time-table for obvious reasons. It is however true that children love to have some rhythm in their daily activities and like to know and to be sure about their programme of activities. The teacher will therefore build up a time-table in consultation with the class so that a proper balance between intellectual and manual work, between 'free' work and 'directed' work is maintained. The time-table has to give the children a sense of security which is child's outstanding need particularly in the earlier years.

Task of our schools is not to make pupils grow. By their very nature they are bound to grow and the task of the schools is only to help them grow in socially desirable directions. We have seen that the method indicated in the preceding pages does foster growth along desirable directions and that learning which results as outcomes of such teaching method is an integral act and is really functional in character. It functions in the life of the child here and now ; it is an outgrowth of his own living and is helping him at the same time to be a citizen of the society, we envisage.

If the business of the educator is to foster growth in a dynamic society. If his aim is to help the child adjust to an ever-changing and complex world and if life is to be looked upon as a continuous adventure in finding better ways of living in a better society, the teacher will have to constantly examine his methods and modify them to meet child's needs and purposes in diversified situations. Method of correlated teaching consumes more time, it is true. But it does so with better, surer and more permanent results. The method is difficult, it is often argued and as such it requires a good professional preparation on the part of teachers. True, the method is difficult, but it is challenging, it is creative. it is an adventure into the realm of science. For, the method is based on the science and philosophy of human behaviour. It deals with needs, purposes and drives of growing children. So, it is creative and dynamic.

In conclusion, however, it may be said that it is not possible to utter the last word in education. So long as life remains to be dynamic, education and its process will continue to change. It cannot therefore be said that the Method of Basic Education-correlated teaching—is the only method in education, not even in Basic Education. "Methodology is a product of experience—tested experience in the social laboratory that is the classroom.[7]

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7. Lazerte, M.E. "The challenge of the class-room" The Manitoba Teacher. Vol. 36. No. 3 Jan-Feb. 1958.

CORRELATION—THE NEED OF CAUTION*

K. G. SAIYIDAIN

When the scheme of Basic education was first formulated, it included a number of features with which you are all familiar. But there were two features which aroused the largest measure of controversy and that controversy is not yet dead. Even amongst the Basic educationists, there is considerable difference of opinion, or at least difference of emphasis, on those two points. One of them was : How far is it possible for Basic education to become self-supporting ? The claim was made out in the early stages that it should be possible for reasonably good Basic schools, working for a period of seven years, with a certain minimum enrolment and after having satisfied certain conditions, to meet at least the expenditure on teachers' salaries. Against this view a number of objections were raised and considerable protests were registered. The second problem was : How far is it possible for correlation to become an affective method of teaching throughout this period of seven years ?

When these discussions were originally initiated, I had, what might be described, as the somewhat restrictive role of resisting exaggerated claim in this behalf. I had then taken the position—which I had also discussed with Gandhiji several times—that while there was great value in the idea of productivity, it was unrealistic to expect that education could become

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*Presidential address for the workshop on 'Correlation' organised by the National Institute of Basic education, (from 18th May to 12th June, 1959)

—From principles and problems of correlated teaching, N.I.B.E. ; 1961.

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self-supporting as a national system. If we want an educated nation we must be prepared to pay for it. Then when it came to discussing correlation, some of us again took the view that we should pitch our claims reasonably and in modernation and not insist that every single thing taught in the schools should be correlated with craft or even, as the Zakir Hussain Committee pointed out, with the physical and the social environments. Even though this view enshrines a basic truth, there is danger that when this method passes into the hands of the ordinary teacher who does not often think for himself, there will be an attempt to force correlation and try to achieve something which is psychologically not possible.

Now, over the last quarter, century the cycle had come a full circle, as they say. There is a great deal of resistance on the part, to some extent of Basic educationists and others against both these ideas. It has been said that this emphasis on productive aspect of craft work goes against the right idea of education. And as for correlation this is just attempting the impossible. You cannot bring about any reasonable correlation to a large extent between these three centres and the knowledge that you wish to impart. Again, I find myself in a position where I have to resist this new tendency. I am profoundly convinced, that from the point of view of the effectiveness of teaching whether of the school subject or activities in crafts, emphasis on the productive factor is important. As Dr. Zakir Hussain said at the first meeting of Central Advisory Board of Education when this problem was discussed, "If all the products of craft from all the schools in India were eventually to be drowned in the ocean even, I would still insist that every single article should be prepared with the utmost efficiency and intellectual and practical integrity of which an individual is capable." That is the principle I think with which all of us should find ourselves in agreement.

So far as correlation is concerned we must realise increasingly that correlation is one of the Basic principles in all good education. And I want somehow to develop in this country the idea that when we are talking of Basic education we are not talking of a petrified orthodoxy. As Shri Shriman Narayan has also said we are really talking of what is essentially good education, according to all those who have some insight into this field. He has quoted that attractive phrase of Acharaya Bhave when he said, "It is not merely Nai Talim as it has been described from the very beginning but NIT NAI TALIM, that is, education which is ever changing, ever new, ever fresh." And he said, "This is the definition of Basic education." I would go a little further and say this is also the definition of all good education. If you are providing education in other ways and according to other methods, even then the moment education becomes a close-in system life and vitality and adaptability go out of it. You are dealing with human minds, and with human organisms who are constantly growing and you are dealing with a world which is changing very rapidly. If the two poles of your process are in a State of constant flux and change, what likelihood is there that any static system of education would be able to bring the individual and the outside environment into fruitfut relationship. Therefore, from this point of view, I would venture to suggest that correlation should be regarded as a sound principle in all educational activities.

You will have to consider how this principle can be applied in a reasonable and intelligent manner and in the context of a proper understanding of the natural knowledge and of human life. This principle of "relationship" in life of the search for unity in diversity is one of the characteristics of knowledge and even the young child either instinctively or intuitively realised that it operates all over the world, and in all the various manifestations of life and its activities. Now, if that is so—and, at least, we have often made the claim that the special contribution of the Indian genius in the field of philosophy has been the reach for unity in diversity—it is only reasonable that in an educational process we should regard it as one of our guiding ideas. So, the attempt to relate the various branches of knowledge and child's activities to one another is educationally perfectly sound. And I would venture to assert that educationists all over the world who have tried to reform education have accepted it as an important principle. They have said : Do not let the child be given small scrippets of information about history or geography or physics or chemistry or languages as if these were so many different wooden blocks being inserted in different holds. The mind of the child is a unity. It tries to understand the world as a unity, and therefore, in learning in all various subjects and activities the child would not lose his sense of the unity and the wholeness of life.

What is the more specific contribution that Basic education has made to this idea ? I feel, in the first place that Basic education has underlined and stressed the fact that activity is basic to learning, that any kind of learning that we wish to develop fruitfully must bring in some element of hand work, productive work or craft, and if that is done, then by bringing the hand and the head, thinking an action into correlation with one another, your acquisition of knowledge would become much more vital and clear than it would be otherwise.

In the course of his remarks Shri Shriman Narayan pointed out that it is wrong to imagine that correlation is very difficult—it is a simple thing because it is a simple in the psychological sense, it is not quite so simple and easy in the practical sense. If you are teaching according to the mechanical method of doling out information by the teacher and its passive assimilation by the student this is routine, stereotyped method developed over the centuries and you will naturally find it easier. On the other hand if you are trying to teach according to the principle of correlation then you have to do your own thinking. I think, it was Anatole France, who once said that, "people would die rather than think". This may not apply to all people but certainly applied to a large majority of them. The average teacher and when I speak of the average teacher, I am not excluding educational administrators like myself and education inspectors, directors etc., usually does not apply his own creative thinking to the problems that he is facing. Now, imagine to yourself a teacher in the Basic primary school who is facing a class of children and wants to teach a lesson on the correlation basis. Now he has got to think out all the relationships, to analyse as clearly as he can, the constituents of the body of knowledge he proposes to impart. He has got to think of the psychology and the interests of the children. He has also to think out the various kinds of craft and production process through which his practical activity is to be carried out. So, from the practical point of view, I feel it is important that the efficiency of our training colleges be improved so that the staff and the students of these colleges may be able to grapple cooperatively with this very difficult problem.

And while I am on the subject I may also point out that whenever we try a useful or creative and explosive new idea, you should not try to judge the results within a short measure of time. If you do so, you are likely to be disappointed. But, if you take a longer period of time as the unit, you can make a proper assessment of whether one or the other system of education is superior. The reason for that is that a sound system of education does not merely impart a certain quantum of knowledge ; it also tries to develop the mind and inculcate the apprehension of relationships. Now all these things take time and if in the first three or four years a child who is being taught according to the basic method is not able to acquire as much knowledge or language or arithmetic as the child in the traditional school, that is no reason for disappointment. If we can quicken the mind and create capacity for creative thinking them all this time-lag will be made up later and the child will not only learn more intelligently but may be able to learn more even quantitatively.

The second contribution of Basic education to this idea has been the broadening of the concept of correlation as elucidated by the Zakir Hussain Committee. We have not merely to correlate our teaching with the craft but with the whole range of physical and social environments. Now if you think of the fascinating world by which the child is surrounded not only in the big cities but uven more so sometimes in the countryside, I really often wonder whether an intelligent teacher cannot correlate almost everything worth while with them—the plants and flowers and mountains and streams and the changes of seasons and all kinds of phenomena by which the child is surrounded. So you have to take these three aspects of his environment into account. There is a very logical reason why these three centres have been chosen. The physical world is the world of natural resources, the social world is the world of human beings and their group relationships and the life of man consists primarily in utilising the resources of the physical and natural environment to make various kinds of things and articles and products, in order to achieve different kinds of social purposes. Therefore, craft becomes a kind of bridge between the natural and the social environment, in which the adult as well as the child tries to utilise the resources of one for the purposes of the other. Then cotton and wood are a part of your natural environment, while a piece of cloth and a table are things which you need in order to live your social and individual life pleasantly and effectively. So man's activity largely consists in taking these materials and producing these articles. Now, if we keep that in mind then it gives us a very sound principle of correlation. We must try and utilise these resources, and engage children in various kinds of productive activities which would enable us to correlate the vital parts of knowledge with what you are doing. And I may also add in passing that if there are items of knowledge that cannot be correlated there is no reason whatever to decry the principle. Surely, there are other intelligent ways in which they can be taught.

One other point I would like to make is with regard to the dangers of correlation. I think it is true that psychologically the most important and difficult part of Basic education is correlation and this is one field in which there has been the least measure of success so far on the part of Basic educationists. Now, the danger is that without applying his mind the ordinary teacher might try and correlate everything indiscri minately, i.e. forcing correlation would not naturally come- Whether or not it is feasible, he would try to bring about that correlation. Attempts like these which I have often come across in schools tend to bring Basic education into ridicule. Nobody bothers whether in the ordinary schools the same kinds of things are being done unconsciously but when they are done in the Basic school, since it is on the testing stage at present, these criticisms are raised !

The second danger is that an attempt may be made to try and work out correlations which are entirely superficial or mechanical, I have very often found many such examples and one of the classic examples is that of a teacher who came into a class-room, with a piece of cotton in his hand and he said, 'Boys, what is this ?' They said, 'Cotton'. What is the colour of this ? 'White'. 'Name some other articles that are white.' And a long list of articles was given out but the one thing he wanted mentioned was not there. So he egged them on to further effort and then suddenly, by one of those happy coincidences which make the lives of teachers bearable, one little child raised his hand and he said, 'Sir, there is one other thing which is white and that is snow.' He said, 'Right, you are an intelligent boy. Now to-day we are going to read about the Himalayas on the top of which there is a great deal of snow and boys, this is going to be a lesson in Geography.' He took the unaction to his soul that, by starting with a piece of cotton which was the basic craft material in that school he had established correlation. I would, therefore, suggest that, in our early attempts, we should not try and force correlations where they are not clear to us or are not feasible. Let us try and establish them wherever they are indicated and can be intelligently and reasonably worked out.

One other condition which must be satisfied for that purpose is that the book must play a more important and a somewhat different role in teaching than is being given in many Basic or ordinary schools. Some teachers whose system of thinking has become petrified have expressed the opinion that the book is not important in Basic education. I would venture to counter that claim and say that the book is even more important in Basic education than it would be otherwise. If the children are learning through their activities and knowledge is being acquired in a practical manner there is need for well planned and intelligent reading materials which would enable the teacher and the child to organise his knowledge properly, to gain new insights and to start off on new adventures of thought and action. So in that way one of the most important objects of the training colleges in India generally and of this Institute in particular should be to try and produce the kind of enriching materials on which both teachers and the children may be able to draw. If we can do that, we can gradually beat down this problem of correlation. Therefore, the problem in this particular field is not the enunciation of principles but to carrying out practical experiments and practical thinking as to how these principles can be translated into action.

PSYCHOLOGICAL AND PEDAGOGICAL BASIC OF CORRELATION

S. PANANDIKAR

Some exponents of Basic education have expressed an opinion that correlation has been emphasised too much by educationists and that this first question, therefore, that I propose to take up for discussion is : Is correlation fundamental to Basic education ? Is it implied in the philosophy of Basic education ?

Of course, the best source to answer the question would be Gandhiji's own writings. Did he consider correlation to be fundamental to Basic education ? I only want to give one or two fundamental quotations to make you realise that according to Gandiji correlation was a very fundamental aspect of Basic education. He has said, "The core of my suggestion is that handicrafts are to be taught, not merely for productive work but for developing the intellect of the pupils." In another place he has said, "A carpenter can teach me the craft. I shall learn it mechanically from him and as a result, I shall learn the use of various tools, but that hardly develops my intellect but if the same thing is taught to me by one who has taken scientific training in carpentry, he will stimulate my intellect. I want to emphasise the words 'stimulate my intellect'. A carpenter may develop the skill in carpentry which is necessary in Basic education, but the craft ought to be taught in such a manner that not only the intellect but the whole personality will develop as a result of learning the craft. Vinobaji later on, in one of the conferences said, "I call the Wardha system of education, the correlation method." (Tra-

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—From principles and problems of Correlated teaching ; N.I.B.E. 1961 nslated) Putting it picturesquely he has said that productive work should give warmth to education and education should throw light on productive work. "You want warmth that the work brings to education and you want the light that education brings to work." (Translated) Acharya Kalalkar, in the same strain, has also said that the chief objection of this system is the intellectual development of the pupil, through productive work. So people who were co-workers with Gandhiji in the field of education, people like Vinobaji or Acharya Kalalkar believe that correlation is fundamental to Basic education so much so that Vinobaji gave the name "correlation method" to Basic education as a whole. And yet we must admit that perhaps there is some truth in the criticism that correlation came to be over-emphasised when we tried to systematise the practice of Basic education.

Basic education has an ideology and a methodology and the two necessarily go together. They are inter-dependent and you cannt make a rigid distinction between the ideology of Basic education and the methodology of Basic education. People trying to systematise Basic education sometimes over-emphasised methodology, especially because the methodology that had to be developed was a new idea. Several experiments were made to evolve a method suitable to the principles of Basic education and it is likely that in these experiments, the methodology came to be over-emphasised. But, it must be admitted that opinion of Gandhiji, is the opinion of all those who were the original exponents of Basic education. The method of correlation interpreted properly is fundamental to Basic education.

What exactly is meant by correlation ? This must be seen in the content of Basic education : The word used in Marathi for Basic education is a very appropriate word. I believe that Acharya Kalalkar and Acharya Bhagwat were responsible for making this word popular. The Basic system of education has been spoken of in different ways : the Wardha system, the craft system, Moolodyog Paddhti, Samvaya Paddhti, etc. But the word used by in Marathi is "Jiwan Shikshan" education for life, and it is not merely education for life but education through life. That I feel is a very appropriate term. It gives the fundamental idea of Basic education, better almost than any of the words that I have come across. The object of Basic education, as of any sound system of education, is to develop the child's personality, drawing out the potentialities of the child, so that he serves society. Both the aspects are essential, the development of individual and making him capable of serving the society of which he is a member. The centre of Basic education, the centre of work in Basic institute is 'Jiwan' or life itself the child life and the people's life.

Basic education is very often spoken of as an activity method. We ought to be quite clear in our minds as to what approach we adopt to activity in Basic education. You can have two types of approaches to activities. You may believe that the child will not learn anything unless he learns through activities. This is using activities as a means. The fundamental faith is in learning by doing. But this is not the approach to activities that we find in Basic education. In the scheme of Basic education activities are not brought in as a means but activities are the centre, the very focus of Basic education and these activities have real life.

A child's life consists of various activities in which he participates. In the Basic system of education the centre is the child's life inclusive of these activities. If the child is trained to do these activities well he will grow into a fully developed personality. This is the principle of 'education through life and life through education'. You are imparting education through life and that is the best way of educating the child, but when you educate through life, you also enrich his life. It is a rhythm and a cycle. You begin the child's life, you educate child through life and as a result of education you enrich the child's life.

If you take this into consideration then it can be seen that what you do in a Basic school is to train a child to conduct the various activities of his life properly, with the full faith that in conducting these activities scientifically his full personality will be developed.

I want to discuss the aspect of knowledge in some detail because, though knowledge is never the goal or end of education, it is certainly looked upon as a very important means of development, specially in the context of education imparted in a school. Even in our own philosophy we think of knowledge as dispelling ignorance, showing what importance we attach to knowledge. We must not run away with the idea that Basic education belittles knowledge. The only point that Basic education makes is that kdowledge should not be made an end in itself. Life should be the beginning and the end, and knowledge a very useful means for living.

When we consider the knowledge that will be built up through the activities of life we have to consider the psychological and the educational basis of this view. This view has certain fundamental implications which are essentially of a psychological and educational nature and I want to consider these implications.

The first is that the need for knowledge arises from action. What is characteristic of man is waiting to do something. Wanting to live. And because he wants to live in a particular way he feels the need for knowledge. This assumption is supported by any school of psychology which gives importance to striving or purpose. It is the striving, the purpose, that is characteristic of man's activities. You may speak of the cognitive, the knowing aspect of the mind, the feeling or the affective aspect of the mind and the conative or striving aspect of the mind. But as MC Dougall has said, conation is fundamental to all the other aspects. Man is predominantly conative, predominantly a striving creature, and it is in his striving that he requires knowledge in order that the end for which he is striving may be achieved. Another assumption made in the theory of correlation is that without knowledge action cannot be complete. The order psychology gave too much importance to reason and neglected the feeling aspect and the fundamental nature of the striving aspect.

Another assumption, which is very important in Basic education and in the whole idea of correlation, is that only knowledge acquired through action will be assimilated properly. There is some knowledge which is inert or dead knowledge, i.e., mere information. It does not become a part of the mind. As students in the school or the college we did learn many subjects. Now two people may have learned the same history from the same teacher. In the case of one person that knowledge may have been dead inert matter, just lumber in the mind. In the case of the other person who had a felt need of all the historical knowledge, this knowledge may have become a part of his personality. Knowledge can be dead and inert when it is mere information. Knowledge can be a part of one's mind, if it is acquired for life, or action, is assimilated and becomes a part of the mind, a part of the personality. Acharya Kalelkar has worked out an analogy between knowledge and food. He says that you can look upon knowledge as food for the mind. Food that is good for you, food that your body needs, is assimilated by the system ; it does not remain in the stomach as indigestible matter. It becomes flesh and blood and bone. In order that you may assimilate this food you must have an appetite, your body must need the food. He says that decidedly the same analogy works in the case of knowledge which is mental food. If knowledge is to be assimilated by the mind, it must be built into the personality ; it must not remain as information to be reproduced when the question paper is there, or to be reproduced on a particular occasion. Knowledge which is alive must be distinguished from knowledge which is dead and inert. Quite a great deal of our knowledge is dead and inert. But there is quite a significant portion that is alive, that is one with a personality. The knowledge that we want in education is knowledge that will be a part of the personality, not dead and inert knowledge which will remain separate.

We may take the example of character. We say that a person has character. That means that he has certain values or virtues like honesty, truthfulness, cooperativeness. Is it enough for a person only to talk about honesty ? You cannot say that a person has character only because he values honesty, or truthfulness. Of course, it is good enough to have these values in life, but values in life means nothing at all unless we are going to realise these values in our own actions. Exactly the same is with the knowledge. If knowledge is to be assimilated, if knowledge is to nurture the mind, it must issue forth in the form of wisdom. What is the difference between a wiseman and a man of knowledge ? A man of knowledge may know much, but he will not be in a position to use that knowledge in life, a person resourceful, and knowledge makes a person resourceful when it is fully assimilated with the mental system, when it does not remain apart. We do not want mere knowledge but knowledge which makes the mind wise, which makes the mind look at a particular situation from a particular point of view and react to the situation in a resourceful manner. This is the idea of knowledge that is implied in Basic education.

You very often find common points between what Gandhiji has said and what educationists of experience the world over have said. It is very often a question of insight. Mahatma Gandhiji's view of knowledge is also a matter of insight. This view is known as the nurture view of knowledge Knowledge nourishes the mind, knowledge is the mind, it is a part of one's personality when it is fully assimilated. We have to realise that the different aspects of mental life, the cognitive, the affective and the conative are all integrated together. And this assumption is at the basis of the concept of correlation in Basic education.

Vinobaji in one of his recent talks said that separation of knowledge and action is violation of psychology, of the social order and of the economic order. It is violation of psychology because the mind is one ; it is one entity in the working of which we may distinguish these aspects, but we cannot separate them. Vinobaji says that in the social order when you distinguish between one class standing for knowledge and another class standing active life or work, you can be sure that there is something wrong with the social order. You cannot distinguish between knowledge and action. And in the economic order, if you have certain people who can produce wealth by knowledge alone and certain others who can produce wealth by labour alone ; it is a violation of the sound economic order also.

When we consider the psychological and educational basis of correlation, we find that there is a great deal in common with the ideas of the American educationist Dewey. Dewey also felt that education was becoming too theoretical, and that in education knowledge was being over-emphasised. And he tried to set the balance right by stating that we should encourage in education to learn through experimental creative activity. Education is not so much teaching the child what they ought to know, as encouraging him to learn for himself through experimental creative activity and self-effort, which are important in education.

From a different angle an idealistic thinker in education, also sees that school is a place where certain knowledge is learned and where the young are disciplined in certain forms of activities. Activity is at the basis of education. Both the extreme thinkers in education came to the same conclusion to which Gandhiji also reached.

Another very fundamental assumption, a psychological assumption involved in the theory of correlation is the view that all knowledge must be looked upon as one ; that compartmentalisation of knowledge into the different subjects or into different fields is artificial. Basic education has throughout emphasised the unity of man's mind, the integral character of the social order in which the child is brought up and the integral character of knowledge.

That knowledge is one and compartmentalisation of knowledge into subjects is artificial is the view that educationists in different countries have reached at different times. A writer in Teachers' World has said that where a subject has been broken down it has failed to reveal to the child the relatedness of his world and his own functions within it. What a child wants to know is, how he is related to the world, what his function is in the world. He is not interested in history as history and mathematics as mathematics. An inspector walked into a school and asked the teacher about the children's work in the class. The class was of very small children who were doing figure work. There was a particular boy more grown up than the others. And the inspector asked the teacher about the progress this boy was making. The teacher said that this boy had no head for arithmetic. He used to look out of the window all the time. The inspector looked out of the window and in the far distance he saw certain sheep and the boy was obviously interested in the sheep. So the inspector asked the boy, "Well, you are looking at the sheep all the time, whose sheep are those ?" The boy said, "They are my sheep, my father's sheep." There was a very big number of sheep. The inspector not expecting an answer, asked the boy how many sheep his father had. And this boy who could not know figures upto hundred, immediately answered that his father had 243 sheep. Obviously counting a hundred without any purpose did not seem interesting to him. The life around him consisted of sheep and goats and such interesting things and there he wanted to know if he had missed one sheep from among the 243 sheep. He would not think in terms of arithmetic, how he thought in terms of sheep and how he would look after them, how he will take them out, how he would bring them back in the evening and son on. A child is interested in the world around, how the world is related to him, how he functions in that world. The parceling of knowledge into different subjects means nothing at all to the child.

This idea of knowledge being one is an idea which must be understood properly. You will realise if you study the cultural history of any country that in the initial stages knowledge was treated as one. Take the case of India, take our Vedas, take our Upnishads. You cannot say which part of Upnishad is philosophy, which part is Ethics, which part is Psychology, which is history and so on. It was all one, the Upnishads or the Vedas contain philosophy, they contain ethics, they contain literature, they contain history.

In our ancient Indian culture we see another character of knowledge which is stressed in Basic education also. All knowledge, the Vedic knowledge or the latter knowledge had something to do with life, with the observances and the practices of life. The pupil got this knowledge from the teacher in connection with life, and life's activities, and it was all one. The same holds for the Greek history. In the beginning of civilisation of any country knowledge was one. In Egypt or China, you find the same phenomenon.

Now the question you may naturally want to ask is, shall we be right in looking upon knowledge in the 20th century as one not divided into the various subjects ? And here I want to come to the theory of psychology, which is very apt and relevant to the whole ideology of Basic education.

This theory in psychology is known as either the recapitulation theory or the culture-epoc theory and is associated with the name of Dr. Hall. I feel that this theory supports the fundamental principles of Basic education in a very significant manner. According to this theory the development of the race and the development of the individual have some parity. The individual in this development passes through the various stages, he recapitulates the stages of development in the life of the race at every stage. This is very significant in several different ways. Here you will find the reason of very many of the things practised in Basic education.

This theory also brings together different systems of education. We know that among educationists, there are naturalists who believe that the child should be allowed to grow according to nature. There are pragmatists who have fundamental faith in the life of the child, in the potentialities of the child and who believe that the child can create values for himself. On the other hand there are ideologists who lay great stress on culture. Yet all these meet on a common ground. The idealist wants the child to assimilate the culture that the race has achieved as he attaches a great deal of importance to culture. The naturalist and the pragmatist also want the child to assimilate the same culture as they believe that if the child is to grow, he must grow as the race grows. This is the very idea of Basic education also. If you take children of the agc of 6 to 14, so far as the cognitive side is concerned this age corresponds to that stage in history when knowledge was one, when knowledge was used for action. Consider how Geometry developed in Egypt, how pythagorous discovered him own theorem, in connection with the apportionment of land and the measurement of land. All knowledge was necessarily associated with action, it arose out of action. The child of 6 to 14 is at that stage. And since the child is recapitulating that stage in his mental development, he should he submitted to the stimuli that are proper to that stage. He should be taught in such a manner that he looks upon knowledge as one. He should be taught in such a manner that knowledge closely becomes associated with action.

As civilization progresses further and further, certain characteristics appear in the race. For instance, in the modern age there are scholars who have an abstract desire for knowledge itself. Such people are rare and we need them. But this we find in the latter stages of civilisation and only in the case of a few mentally matured and developed individuals.

Let us now consider some practical problems in correlation.

In spite of the fact that correlation is a natural way of learning and teaching for children, the technique has been found to be difficult by teachers. The artificial conditions of the class-room make the use of correlation difficult. In the early days of childhood, the child is not taught anything, yet he learns much. He learns to walk and talk without any deliberate teaching. The sounds he makes, the words he speaks are learnt from those who are around him. Thus learning takes place through the child's relations with people in the environment. This is nature's method and it had been in vogue in ashrams under gurus in ancient times. This system later was replaced by class-room teaching. The result was that the teacher replaced the use and the real life situations gave way to the artificialities of an artificial class-room, and the atmosphere of interpersonal relationship and affection between the guru and the disciple was replaced by formal relationship between the teacher and the pupil.

It was to deviate the artificiality of instruction that correlation came to be recognised as the method to be used in Basic education. Notwithstanding the naturality inherent in the correlated method of teaching, teachers generally find it difficult to practise. The reasons are obvious. The teachers have been habituated to teaching by the class-room teachnique and they are naturally reluctanta to leave the practice and take to new technique which involves some planning and imagination in its use.

One difficulty which the teachers face is that correlation requires individual attention to pupils. The personal difficulties of children arising out of their manifold experimental situations, often pose various problems and questions before the teacher. These are difficult to be met in big classes of forty or more pupils.

Another difficulty is that the present syllabus is traditional and book-centred, where as correlated teaching contemplates an activity centred curriculum. Unless we introduce the latter, teachers will always meet with difficulties in correlational teaching.

Another difficulty is that the teacher's general knowledge is as a rule inadequate and the use of correlation requires from the teacher a readiness to answer question that the children will use.

The problem of examinations is another serious problem. The present system of examination is of the traditional nature where the passing of examination depends upon repetition and memory. This encourages unintelligent storing of facts in the pupils' mind to be reproduced in the examination hall. So long as the achievements are to be judged by this traditional type of examination, correlated teaching cannot be efficiently practised.

Out of all of these difficulties, that pertaining to the syllabus needs greater elucidation. The problem of the syllabus in a Basic school is to be dealt with in a comprehensive and detailed way. Shrimati Asha Devi has pointed out that the syllabus of Basic education has to be evolved from real life situations. Such a syllabus would not bring out an unilateral development of the child but would be instrumental in evolving his all round development. The Basic syllabus has to be evolved by teachers, where as the traditional school syllabuses are imposed upon teachers. Further the basic school syllabus, as it is evolved, is an integral whole and therefore, provides for the integrated development of the child whereas the traditional school syllabus aims mainly at the intellectual development of pupils.

In framing and evolving the Basic school syllabus one will have to use caution and be careful that the new scheme is not fitted within the frame-work of the old. Activities suiting the age of children of various grades need to be explored and the academic contents, whatever can be genuinely drawn out from them, should be indicated. The activities so chosen will be actual and not mock activities. These activities may be from the three centres—physical environment, the social environment and the craft work. These include the routine activities, activities pertaining to health and hygience, school life activities, self government news bulletin, school library, games, elocution contests, literary work, shramdam, helping at fairs and epidemics, celebrations of religious festivals as well as national festivals, community work, social service activities, cultural activities, celebrating jayanties, organising hykes and excursions etc.

The activities should be arranged in order and according to their sequence should be planned and classified into daily, weekly and monthly plans.

In planning the cctivities the teacher should have a clear idea of what correlation is. He should be able to make the difference between forced and genuine correlation. Further, he should know when and where the knowledge can be best correlated with the child's real life situation and the activity. In doing so, he will have to guard mainly against two things viz., (1) not seeking immediate correlation (2) teaching every thing through correlation. Thus correlation is not to be seen in individual lessons but is to be seen in well planned programmes of work as a whole. A Basic syllabus needs to be evolved not, in the artificial situation of practising schools attached to the training colleges, but in average schools which can be considered to be typical of other schools.

It also needs be mentioned here that the teacher should know the difference between association and correlation. He is not to mistake the latter for the former. Thus he may say takli is round and circle is round. In such cases similarity, contiguity and recency are taken into account and hence they provide association and not correlation. In correlation 'why', 'wherefore' and 'how' are involved, and unless these are considered, knowledge ceases to be correlated. As a matter of fact, these 'why' 'how' and 'wherefore' are 'mental-tin-openers.' They however, require on the part of the teacher a knowledge of the experiences of child and the world. In early stages, the child wants to know the 'how' of things but by 12 years of age he is ready to conceive the 'why' of things and wants to know the causes which bring out certain effects. Through answers to this 'why' the dull enriches his knowledge whether it be in economic, social or any other field.

The plans of activities prepared by the teacher should provide room for sufficient flexibilities. The teacher should be left free as to how to introduce modification by discarding things which are not suitable to the occasion and making additions wherever the situations demand them. The main feature of these plans should be that they should provide fairly comprehensive knowledge. The targets fixed should be specifically mentioned in the plan. These targets may be with regard to craft work, intellectual development and social development.

Guide books for teachers suggesting activities and academic contents the possible points of correlation, apportionment of time, the methods of work to be adopted in the school evolution and other records to be maintained are an urgent necessity. Another eqully important need is for good reference material, better services of books or a general encyclopaedia for the use of teacher.

समवायी शिक्षण में परंपरित पद्धतियों का स्थान

द्वारिका सिंह

आज हजारों परंपरागत प्राइमरी और मिडिल स्कूल बुनियादी शालाओं में परिवर्तित हो रहे हैं। प्रश्न यह है कि उनका स्वरूप कैसा होगा? हजारों हजार ऐसे विद्यालयों के लाखों लाख शिक्षक अभी बुनियादी शिक्षा में प्रशिक्षित नहीं हैं। उनके प्रभारी निरीक्षक भी बुनियादी शिक्षा में पूर्ण रूप से प्रशिक्षित नहीं हैं। इस तरह के स्कूल पूर्ण रूप से बुनियादी शिक्षा के योग्य सुसज्जित भी नहीं हैं। इनमें उद्योग का प्रबन्ध नहीं हो पाया है। प्रकृति और समाज इनसे काफी अभी दूर है। ऐसी स्थिति में बुनियादी शिक्षा के कार्यान्वय की स्थिति क्या होगी? बुनियादी शिक्षा का वाहन "समवाय" है, कसौटी "स्वावलम्बन" है और साध्य "समाज-निर्माण" है। यदि इस बात को स्वीकार किया जाय, तो बिना किसी हिचक के यह भी स्वीकार करना होगा कि जो विद्यालय स्वावलम्बन की ओर नहीं बढ़ते, जिनका क्रियाशीलन विद्यालय की चहारदीवारी के भीतर सीमित है और जो समवाय का मार्ग नहीं अपनाते, उन्हें बुनियादी विद्यालय कैसे माना जाय?

अभी देश में तीन प्रकार के विद्यालय पाये जाते हैं--एक वे हैं जो कट्टर पंथी बुनियादी विद्यालय अपने को मानते हैं, दूसरे वे हैं जो अपने को बुनियादी विद्यालय स्वीकार करने में प्रसन्नतापूर्वक अपनी सहमति नहीं देते हैं और तीसरे वे हैं जो दोनों के बीच अपने को पाते हैं। इस प्रसंग में बुनियादी शिक्षा की कसौटी और साध्य अर्थात् "स्वावलम्बन" और "समाज-निर्माण" की चर्चा नहीं की जा रही है। आगे की पंक्तियों में इस बात की चर्चा होगी कि समवाय के सम्बन्ध में उक्त तीनों प्रकार के विद्यालयों में कौन-सी भ्रान्तियां फैली हुई हैं। कट्टरपंथी बुनियादी विद्यालयों में अधिकांश की ऐसी भावना है कि चाहे जो कुछ हो, समवाय के बिना पढ़ना और पढ़ाना उन्हें मान्य नहीं। उनमें से अधिकांश का यह भी कहना है कि समवाय तो अवसरानुकूल प्रसंगों पर अवलम्बित है—इसलिए इसमें पुस्तकों का कुछ भी

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स्थान नहीं है। उनमें से कुछ ऐसा भी मानते हैं कि दुनिया की सारी वार्ताओं, चर्चाओं और प्रसगों का अध्यापन केवल उद्योगों द्वारा ही किया जा सकता है। उनमें से कुछ का यह भी विरोध है कि परंपरित शिक्षण-विधियां चाहे कितनी भी अच्छी क्यों न हों, उनका अनुसरण और उनका उपयोग या उनका प्रवेश नई तालीम के विद्यालयों में नहीं किया जा सकेगा। उक्त शेष दो प्रकार के विद्यालय कुछ स्पष्ट समवाय के बारे में सोच ही नहीं सकते।

फलतः आज देश में जो "समवाय" की स्थिति है उसे संतोषजनक नहीं कहा जा सकता। "समवाय" का सरल शब्दों में सीधा अर्थ यह होता है कि "करके सीखो और सीख कर करो"। आज अधिकांश कार्यकर्त्ताओं की अरुचि क्रियाशीलनों की ओर से है। नहीं करके कुछ पढ़ना-पढ़ाना जीवन का क्रम बन गया है। इसलिए करके सीखने और सिखाने की प्रक्रिया उन्हें बोझिल मालूम होती हैं। कट्टरपंथी बुनियादी शालाओं के लोग "करने" में इतना विश्वास करने लगे हैं कि सीखने से अरुचि उत्पन्न होने लगी है। दुर्भाग्यवश समवाय के लिए यह एक भयावह स्थिति है।

पुरानी बुनियादी शालाओं के कुछ लोगों की ऐसी धारणा है कि परम्परित अच्छी शिक्षाविधियों का कोई स्थान समवाय-पद्धति में नहीं है। यह उनके लिए भयंकर भूल होगी। "समवाय" काम के अवसर देता है। अवसरों से सीखने का मौका मिलता है। "समवाय" करके सीखने की प्रक्रिया को दृढ़ करता है। वह सीखने की प्रक्रिया का विरोध नहीं करता। जहां परंपरित शिक्षा-प्रणाली में क्रियाहीन विद्या-अर्जन की परंपरा थी और जहां ज्ञान का आधार शून्य होता था, जहां कल्पना के आंकड़े होते थे, जहां प्रकृति की ओर आंखें नहीं जा पाती थीं, जहां समाज और विद्यालय के बीच गहरी खाई थी, जहां बोध पर बुद्धि का आधिपत्य था, जहां कर्तव्य को भावना दबाए हुई थी, जहां बुद्धि कर्म को हेय समझती थी, जहां श्रम और श्रमिक नीची दृष्टि से देखे जाते थे, जहां भोग और भोक्ता जीवन के लक्ष्य थे, जहां अकर्मण्यता अपना प्रभाव डाले हुई थी; वहां बुनियादी शिक्षा के क्षेत्र में "समवाय" ज्ञान को सरल बनाता है, बुद्धि को बोधमय बनाता है, भोग को कर्माधारित बनाता है, बुद्धि को कर्म का पेपर-वेट देता है, और ज्ञान को ठोस प्रत्यक्ष, अनुभवपूर्ण और उपयोगी बनाता है। समवाय के इस महत्वपूर्ण पहलू को मानते हुए यह समझना होगा कि बालक-बालिकाओं के शिक्षण में एक ऐसी प्रक्रिया होती है जिसमें वे करके ही सीख सकेंगे। उदाहरण के लिए यदि २ आमों को २ आमों में मिला कर ४ आमों का ज्ञान दिलाना हो, तो किसी भी बालक-बालिका के लिए ४ आमों को एक साथ मिला कर गिनना आसान होगा। पदार्थों को मिला कर जोड़ की प्रक्रिया समझना आसान होगा। लेकिन इसका

यह मतलब नहीं होगा कि कृष्णपट्ट पर या पाटी पर या स्लेट पर या कापी पर २+२ बराबर ४ होते हैं, इस प्रक्रिया के समझाने से मुंह मोड़ना होगा। खाने वाले ये ४ फल न बोर्ड पर रखे जा सकते हैं और न स्लेट और न कापी पर ढोए जा सकते हैं। जब दो पदार्थों के साथ अन्य दो पदार्थ मिलते हैं तो एकत्र चार पदार्थों के प्रत्यक्षीकरण का भान होता है। जीवन को समृद्ध, उन्नत और विकसित करने के लिए आवश्यक होगा कि जो भोग की सरल क्रिया का प्रत्यक्षीकरण हुआ है, उसका उपयोग और अभ्यास अप्रत्यक्ष रूप से भी किया जाय। इस परोक्ष या अप्रत्यक्ष क्रिया को परिपुष्ट करने के लिये गणित-शिक्षण की जो ठोस विधियां हैं, उनको अपनाना होगा। बाल्यावस्था में स्मृति तेज होती है, लेकिन स्थायी धारणा के लिए यह आवश्यक होता है कि स्मृति के भीतर प्राप्त किया हुआ ज्ञान बार-बार दुहराया जाय। साधारण गणित की प्रक्रियाओं में गणित-शिक्षण के जो नियम हैं, उनके पालन करने से ही गणित सम्बन्धी ज्ञान का वर्द्धन होगा जिससे कल्पन-शक्ति का विकास होगा और वह विकसित कल्पना नयी दृष्टि की बुनियाद बनती है।

दुर्भाग्य से, भावनावश कुछ शिक्षक गिनती के लिये पूनियों का उपयोग करते हैं। वे ऐसा मानते हैं कि गणित के लिये उद्योग की सामग्रियों को छोड़ कर और भी चीजों का गिनना शायद "समवाय" नहीं होगा। पूनियों को केवल गिनती के लिये बार-बार स्पर्श के कारण उनके बैठे हुए रेशे उमड़ जायेंगे और उनमें वायु या नमी के प्रवेश करने से वे काम के लायक नहीं रह जायेंगे। इस प्रसंग को यहां इसलिये रखा गया कि शिक्षकों को यह स्पष्ट समझना चाहिए कि समवाय के भीतर जिस हद तक क्रियाओं को करना है, उसी हद तक उन्हें सीमित रखना चाहिए। ऐसा नहीं कि भावनावश परपरित उपयोगी शिक्षा-विधियों को छोड़ कर बलात् उद्योग की क्रियाओं को शिक्षण के लिये लादा जाय।

छात्र, विद्यालय में तरह-तरह के काम करेंगे, जैसे—यदि आवासीय विद्यालय होगा तो प्रातः उठना, सामूहिक प्रार्थना, व्यक्तिगत सफाई और सामूहिक सफाई, रसोई में जलपान और भोजन, सूत्रयज्ञ, समाचार-वाचन, बागवानी, खेती, पशु-पालन, मधुमक्खी-पालन, चर्मोद्योग, बढ़ईगिरी, लोहारगिरी, कताई, बुनाई, रंगाई, छपाई, भंडार ठीक करना, चीजों की बिक्री करना और उनका हिसाब रखना, खेलकूद, आसन, योगिक क्रिया, सांस्कृतिक कार्यक्रम और सभाओं का आयोजन, शैक्षिक-यात्राओं, सामाजिक कामों, प्रकृति निरीक्षण इत्यादि का काम बच्चे करेंगे। बच्चों की उम्र और प्राप्त समय के अनुसार प्रत्येक क्रियाशीलन का क्षेत्र निर्धारित होगा। क्रियाओं के भीतरजो सीधा ज्ञान प्राप्त होगा वह समवायी ज्ञान होगा, जैसे स्थानीय भ्रमण से दिशाओं, जमीन

का ढाल, नदी का बहाव, तरह-तरह की फसलों, स्थानीय जीव-जन्तुओं, मिट्टी की बनावट; रसोई से किस्म-किस्म के धातुओं के गुण, तरकारियों की पहचान, भोजन सम्बन्धी विभिन्न पदार्थों के लाभ, परोसने का ढंग, बर्त्तनों की सफाई, तूतिया जैसे जहरीले पदार्थ से बचाव, ताप की वाहन क्रिया, जल और नमक के विशिष्ट गुण; कपास उत्पादन की प्रक्रिया से मिट्टी का चुनाव, पुष्ट बिनौले की जाँच, किस्म-किस्म की कपासों की परख, उनमें लगने वाले कीड़ों की पहचान, कीड़ों के बचाव के तरीके, एक वार्षिक और बहुवार्षिक कपासों की पहचान; कताई की प्रक्रिया से विभिन्न आसनों, तकली और चरखों के प्रत्येक अंग का परिचय, सींक, चकती, नच, कूट, नीला कपड़ा, विभिन्न चक्र, तकुआ, गिर्दी, माल-अमाल, मल-काठी, स्प्रिंग आदि का परिचय; धुनाई की प्रक्रिया से विभिन्न पिंजनों का ज्ञान, आत्मा, कांकर, मोढ़िया, जिम्भी, सेमल, गंधार, शीशम, काँटी, तांत, पुट्ठे, हत्था, कमठा, डोरी, पूनी-सलाई-हत्थ पटला, सादरी इत्यादि का ज्ञान होगा।

पर प्रश्न यह है कि विभिन्न ज्ञानों की क्रमबद्धता, स्मृति में उनका टिकाव, विभिन्न ज्ञानों में पारस्परिक संबद्धता और उन पर आधारित कल्पित ज्ञानों का तारतम्य किस प्रकार होगा। इस बात को शिक्षकों को अच्छी तरह समझना चाहिये। परंपरित प्रणाली में शिक्षण-विधियों के सम्बन्ध में शिक्षा शास्त्रियों ने नवीनतम खोजें की हैं। उन शिक्षण-विधियों से ज्ञानार्जन आसान होता है, क्योंकि शिक्षण-विधियों के निर्माण में बाल मनोविज्ञान आधारभूत सामग्री रहता है।

उदाहरण के लिए आप इतिहास में ग्यारह वर्ष के भीतर बालक-बालिकाओं के लिए कहानी की विधि का अनुसरण करते हैं। ग्यारह से चौदह साल के छात्र और छात्राओं के लिए वर्णनात्मक विधि का उपयोग करते हैं। चौदह से ऊपर के छात्र और छात्राओं के लिये प्रारूप-विधि और केन्द्रित-विधि का उपयोग, मूल स्रोत, साक्षात दर्शन, ऐतिहासिक स्थानों का भ्रमण, चित्रित वर्णन, समय-स्तम्भों, शिला-लेखों, पुरातत्व साहित्यों के अध्ययन के आधार पर ज्ञान के प्रत्यक्षीकरण के लिए विधि अपनाते है। भूगोल के पठन-पाठन में नक्शों के अध्ययन, वस्तु-चित्रण के अध्ययन, रेखा-चित्रों के अध्ययन, अजायबघरों का उपयोग, रिलीफ मैपों, ऐलबम, कन्टूरों, भ्रमणों का उपयोग करते हैं।

भाषा और साहित्य सम्बन्धी विषयों के ज्ञानवर्द्धन के लिए शब्द और वाक्य-प्रणाली, कहानी और वर्णन की प्रणाली, शब्द-चयन और वाक्य गठन की प्रणाली, मौन-पाठ और प्रश्नोत्तर की प्रणाली का उपयोग करते हैं। गणित के शिक्षण में पूर्व संचित ज्ञान की पुनरावृत्ति, नई समस्याओं के हल के लिए नए प्रश्न, नए प्रश्नों के हल के लिए पूर्व संचित ज्ञान का उपयोग,

प्राप्त ज्ञान के स्थायित्व के लिए सिंहावलोकन और अभ्यास का क्रम और गृह-कार्य इत्यादि विधियों का अनुसरण करते हैं।

ऊपर की कुछ नवीनतम शिक्षण विधियों का उपयोग अच्छे शिक्षक करते हैं। समवाय में क्रियाशीलन के द्वारा ज्ञानार्जन के अवसर मिलते हैं। पर इसका यह मतलब नहीं होगा कि प्राप्त ज्ञान की संबद्धता के लिए और उनके स्थायित्व के लिए जो परंपरित विधियां लाभप्रद हैं, उनका भावनावश बहिष्कार किया जाय। जितने कुशल शिक्षक बुनियादी विद्यालयों में आज काम कर रहे हैं वे समवाय की मर्यादा को समझते हैं। साथ ही, परंपरित शिक्षण-विधियों के महत्व को भी मानते हैं। इसलिए शिक्षकों को यह बात अच्छी तरह समझनी चाहिए कि परंपरित शिक्षा में जितनी उपयोगी विधियां हैं, उन्हें ज्ञानवर्द्धन के लिए उपयोग करना होगा।

एक बात और, समवाय की विधियां ऐसी नहीं हैं कि किसी एक प्रक्रिया में ज्ञान के सभी पहलू उपस्थित किए जा सकेंगे। तकली से अकबर, बाबर नहीं निकलेंगे। सूत की आसनी से विक्टोरिया नहीं निकलेगी। कमठा या धुनकी से राष्ट्रीय आन्दोलन नहीं निकलेगा। रंगाई और छपाई से राष्ट्रसंघ का भान नहीं होगा। कहने का मतलब यह है कि हर क्रिया का अपना निश्चित क्षेत्र है और साथ ही बच्चो की उम्र और समझ भी सीमित है। किसी एक उद्योग या अनेक उद्योगों से सारे ज्ञान नहीं दिए जा सकेंगे। बलात् ज्ञान देना समवाय नहीं होगा, बल्कि विषमवाय होगा।

कुछ शिक्षक शिक्षाक्रम के विषयों को इसलिए नहीं पढ़ा पाते चूंकि उस वक्त तक उनको समवाय नहीं सूझता। शिक्षकों जी कह असमर्थता बच्चे के बौद्धिक विकास को कुंठित करने का कारण बनेगी। यदि समवाय नहीं सूझता है तो शिक्षाक्रम के अनुसार कुछ प्रसंगों को सीधे पढ़ाना होगा—जिसे आप 'डाइरेक्ट टीचिंग' कहते हैं। ऐसे प्रसंगों को आप शिक्षक-गोष्ठियों में रखें और उनका हल निकालें।

"समवाय" किताबों का सघन उपयोग चाहता है। समवाय की प्रणाली में एक या दो किताबों के बदले अनेक किताबें चाहियें। कुछ किताबें गहरे अध्ययन के लिए होंगी और कुछ किताबें ज्ञानार्जन के लिए सरसरी तौर पर पढ़नी होंगी।

समवाय-पद्धति में प्रत्यक्ष क्रियाशीलनों पर ज्ञान आधारित होगा। साथ ही, आधारित ज्ञान की संबद्धता, क्रमबद्धता और स्थायित्व के लिए उन्नत शिक्षणविधियों का उपयोग करना होगा। परंपरित शिक्षा-प्रणाली में जितनी सर्वोत्तम शिक्षण विधियां हैं, उनका आंखें खोल कर उपयोग करना होगा।

बुनियादी शिक्षा में समवाय

हरिहर आनन्द बौड़ाई

समवाय की परिभाषा

समवाय बुनियादी शिक्षा का मूल केन्द्र है। यदि समवाय को स्पष्ट किया जाय तो हम कह सकते हैं कि "समवाय है पढाई के विषयों का दस्तकारी के सामान के साथ, दस्तकारी की क्रियाओं के साथ, दस्तकारी के काम के साथ और बालक के प्राकृतिक तथा सामाजिक चौगिर्द के साथ अनुबन्ध।" वास्तव में पाठ को रुचिकर बनाने में समवाय सहायक होता है। समवाय एक प्रकार की कला है जिसमें कुशलता प्राप्त करने के लिए शिक्षक को बाल मनोविज्ञान से परिचित होना चाहिए और उसमें निरीक्षण की शक्ति भी होनी चाहिए। वास्तव में यदि देखा जाय अनुबन्ध कोई नई चीज नहीं है—दिल, दिमाग और हाथों का क्रियात्मक सहयोग ही अनुबन्ध है। मनोवैज्ञनिक दृष्टि से ज्ञान एक अभिन्न एवं अखण्ड इकाई है। बुनियादी शिक्षा में ज्ञान का सर्वांगीकरण करके उसको अधिक महत्वपूर्ण बनाया गया है। बालक के मस्तिष्क को भिन्न-भिन्न भागों में नहीं बांटा जा सकता है, यदि यह सम्भव भी हो तो बालक के ज्ञान एवं व्यक्तित्व का संतुलित विकास न होगा। यह भी एक मनोवैज्ञानिक तथ्य है कि जब हम किसी वस्तु को किसी दूसरी वस्तु से संबंधित करके सीखने का प्रयत्न करते हैं तभी हमें उसे स्मरण रखने या समझने में सरलता होती है।

बुनियादी शिक्षा में समवाय क्या है ?

बुनियादी शिक्षा उद्योग केन्द्रित व जीवन केन्द्रित शिक्षा है। बालक का विकास तीन आधारों पर होता हैं (१) प्रकृति, (२) उद्योग, और (३) समाज प्रकृति से अभिप्राय है जैसे मौसम का बदलना, जानवरों का आवास, सूर्य-चांद के निकलने और अस्त होने की प्रक्रिया। उद्योग-उति+योग से बनता है। उद्योग को दूसरे शब्दों में प्रकृति का तथा पुरुष का संतुलित विकास कह सकते

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हैं । पुरुष भांति-भांति के कच्चे मालों को प्रकृति की गोद से प्राप्त करता है । समाज से अभिप्राय है दक्षता से बातचीत करना, सभाएं करना, समाज की कल्याण योजनाएं आदि ।

समवायी शिक्षण प्रणाली में बालक का ज्ञान उसके द्वारा की जाने वाली विभिन्न क्रियाओं पर निर्भर करता है । बालक बुद्धिपूर्वक तरह-तरह का उपयोगी काम करेगा । सभी ज्ञानों का एक दूसरे से समन्वय होगा । वास्तव में कर्म को ही ज्ञान का आधार माना जायेगा ।

बुनियादी समवाय में कोई विषय गौण या मुख्य नहीं होता है, सब एक दूसरे से गुंथे रहते हैं । हमें यह भी याद रखना चाहिए कि बुनियादी शिक्षा की पद्धति का आधार समग्र जीवन होता है, न कि केवल श्रम । कर्म एवं ज्ञान जीवन के दो पहलू हैं । जीवन पर सारी बुनियादी शिक्षा का ढांचा खड़ा रहता है । श्रम समाज रचना का मूल तत्व है, अतः बुनियादी शिक्षा समग्र जीवन के निर्माण की शिक्षा है । मनुष्य प्राकृतिक साधनों को अपने श्रम से उत्पादित वस्तु में परिवर्तित करता है, यही उद्योग कहलाता है । उद्योग का उत्पादन फिर समाज में ही आता है ।

उद्योग का चुनाव देश की प्रकृति के अनुकूल होना चाहिए । उदाहरणार्थ, यदि कहीं रुई पैदा न होती हो तो यह आवश्यक नहीं है कि सूत की कताई ही उद्योग रखा जाय । उद्योग का चुनाव वहां प्रकृति के अनुकूल ही होना चाहिए । प्रकृति शिक्षा की सबसे बड़ी उद्योगशाला है । प्रकृति को हम दो भागों में विभक्त कर सकते हैं, अंतः प्रकृति तथा बाह्य प्रकृति । वास्तव में सामान्य ज्ञान का पाठ प्रकृति की रम्य गोद में भली भाँति पढ़ाया जा सकता है ।

सामाजिक केन्द्र बहुत महत्वपूर्ण है । यदि हम कोई भी केन्द्र बिन्दु लें तो सारी बुनियादी शिक्षा सामाजिक वातावरण सम्पन्न होती है । उदाहरण के तौर पर सामाजिक उत्सव, धार्मिक व राष्ट्रीय पर्व । मेले व सार्वजनिक सभायें चुनाव, डाकखाना, चौपाल आदि को उपयोग में लाया जा सकता है ।

समवाय केन्द्र का चुनाव व सफलता

१. समवाय का विषय छात्र, कक्षा तथा परिस्थिति के अनुसार करना चाहिए किसी विशेष समय छात्र भ्रमण में अधिक रुचि लेते हैं और कभी उद्योग में ।

२. समवाय की सफलता का मुख्य आधार अध्यापक है । अध्यापक सब विषयों में योग्य, परिश्रमी, उत्साही तथा सहयोग से काम लेने वाला होना चाहिए ।

३. पाठ की योजना पहले से ही बनाकर रखनी पड़ेगी । छात्रों से सम्पर्क रखना

पड़ेगा। अध्यापक का सम्पर्क इतना गहन होना चाहिए कि वह अपने छात्रों की अन्य कठिनाइयों का भी हल निकाल सके।

४. बुनियादी शाला में पर्याप्त कृषि शाला उद्योग, खेल का मैदान, सम्पन्न पुस्तकालय, चरखी, पूनी, रुई, तकली, फावड़े, खाद, कृषि संबंधित सामग्री, कागज, गत्ता, इत्यादि होने चाहिएं।

५. समवायी पाठ के लिए उपस्थित स्थितियों का उपयोग करना चाहिए। उदाहरण के तौर पर श्रेणी में किसी बालक को खुजली है तो अध्यापक उसको दिखलाकर छात्रों की सहायता से स्वास्थ्य विज्ञान का एक अच्छा पाठ पढ़ाया जा सकता है। ठीक इसी प्रकार से यदि बालकों को ओलम्पिक खेल का ज्ञान कराना हो तो खेल-कूद की प्रतियोगिता की सहायता एक चतुर अध्यापक ले सकता है।

समवाय के भेद

१. बहु अंगीय :—इसके अन्तर्गत हम एक ही क्रिया को लेकर एक से अधिक विषयों का ज्ञान करा सकते हैं, जैसे कृषि (मूल उद्योग) को लेकर संबंधित भूगोल, वनस्पति शास्त्र तथा गणित आदि पढ़ाया जा सकता है।

२. सक्रिय समवाय :—इसके अन्तर्गत एक क्रिया के साथ ही साथ विषय का ज्ञान कराया जाता है। इसके अन्तर्गत कार्य के द्वारा ही शिक्षा दी जाती है।

समवाय के गुण

१. क्रिया से सीधा सम्बन्ध हो।

२. विषय के प्रति रुचि उत्पन्न करे।

३. स्वाभाविक सरल तथा विषयों को स्पष्ट करने वाला हो।

४. वास्तविक जीवन से सम्बन्ध हो। उदाहरण के लिए तकली को घुमाकर पृथ्वी का घूमना नहीं पढ़ा सकते हैं या कुर्सी की टांगें बनाकर उसे खड़ा करके अपने पैरों पर आप खड़े होना या आत्मनिर्भरता का पाठ नहीं पढ़ा सकते हैं, क्योंकि कुर्सी एक भौतिक पदार्थ है।

५. शिक्षा के सर्वमान्य आदर्शों के अनुसार हो।

६. समय का पूरा-पूरा उपयोग हो।

समवाय को भली प्रकार समझने के लिए अत्यंत आवश्यक है कि उसको सही रूप में ही कक्षा में दिया जाना चाहिए।

समवाय पाठ की सही तैयारी

समवाय का सही समय वही है जो बालक के विचार, मस्तिष्क और रस को जागृत करे। समवाय वही स्वाभाविक माना जाता है जिससे कुछ हलचल हो। अभिप्राय यह है कि बच्चे की मानसिक प्रवृत्ति क्रियात्मक हो जाय। इसके अतिरिक्त निम्नलिखित बातों का ध्यान रखना आवश्यक है।

१. योजना बनाना।
२. योजना के अनुसार सामग्री जुटाना।
३. योजना के अनुसार कार्य करना।
४. किये हुए काम की जाँच करना।
५. अनुभवों को लिखना, उसके अनुसार पाठ को पढ़ाना।

एकाधिक कक्षा अध्यापन तथा समवाय

मिलाप चंद्र दुबे

शिक्षा के सार्वजनिक प्रचार एवं प्रसार की दृष्टि से जनसंख्या की छोटी से छोटी इकाई को शिक्षा की सुविधा दिये जाने के लिए प्रायः अनेक प्रगतिशील एवं धन सम्पन्न देशों में भी एक तथा एकाधिक अध्यापकीय शालाओं को व्यवस्था में स्थान देना पड़ता है। संयुक्त राज्य अमेरिका, आस्ट्रेलिया तथा स्वीडन आदि देशों में एक अध्यापकीय शालाओं की संख्या का अनुपात भारत से भी अधिक है। भारतीय शिक्षा के इतिहास में वैदिक काल से आज तक एक अध्यापकीय शालाएं किसी न किसी रूप में विद्यमान हैं। आज भारत के राष्ट्रीय विकास की योजना में शिक्षा को सार्वजनिक एवं अनिवार्य बनाने में भारत जैसे ग्रामों के देश में एक छोटे से छोटे झोंपड़ियों के झुरमुट को शिक्षा सुविधा सुलभ कराने के लिए एक अध्यापकीय शालाओं की प्रथा की अवहेलना नहीं की जा सकती है। ऐसी दशा में शिक्षा शास्त्रियों तथा शिक्षा व्यवस्थापकों के समक्ष यही प्रश्न है कि इन शालाओं में जहां तक एक अथवा एक से अधिक शिक्षक को अनेक कक्षाओं का शिक्षण करना पड़ता है, कुशल अध्यापक अध्यापन के लिए किस पद्धति का अनुशीलन करे ?

राष्ट्रीय शिक्षा योजना में बुनियादी शिक्षा प्रणाली की मान्यता के कारण शिक्षा की रीति-नीति में एक विशिष्ट परिवर्तन आया है। बुनियादी शिक्षा के अनेक सिद्धान्तों के साथ समवायी शिक्षण उसकी एक प्रधान विशिष्टता है। बुनियादी शिक्षा को जीवन की शिक्षा, जीवन के लिए और जीवन के द्वारा माना जाकर जीवन केन्द्रित क्रियाओं और अनुभवों को शिक्षा का माध्यम माना गया है। इसीलिये इसको कर्म के साथ ज्ञान की साधना भी माना है जिसमें साध्य रूप ज्ञान और साधन रूप कर्म में समन्वय स्थापित करने का प्रयत्न है। इस लक्ष्य की प्राप्ति के लिए शिक्षार्थी अनेक जीवनोपयोगी कार्य की इकाइयों में प्रवृत्त होंगे और अपने इष्ट कार्य की सफलता के लिए अनेक समस्याओं का

From B. T., III (4) Oct. 1960

समाधान चाहेंगे । और यही उनके ज्ञान प्राप्ति का स्वाभाविक साधन होगा । यह ज्ञान प्रारम्भिक अवस्था में विभिन्न विषयों में विभागीकृत न होकर एक अखण्ड समष्टि रूप में होगा । अवस्थागत विकास के अनुसार यही ज्ञान किशोरावस्था में विभिन्न ज्ञान खण्डों के रूप में स्वाभाविक रूप से व्यवस्थित हो सकेगा ।

समवायी-शिक्षण के प्रादुर्भाव के साथ इस क्षेत्र के कार्यकर्ताओं के समक्ष यह भी कल्पना है कि एक ओर तो यही समस्या थी कि एक शिक्षक को अनेक कक्षाओं का शिक्षण करना पड़ता है । अब इस समवायी शिक्षणे में केवल पुस्तकीय शिक्षण के स्थान पर शिक्षा को क्रिया केन्द्रित योजना द्वारा व्यावहारिक पक्ष पर बल देकर शिक्षक के कार्य को अधिक बढ़ा कर शिक्षण की समस्याओं को इन एक अध्यापकीय शालाओं में और भी अधिक विषम बना दिया है । इसी समस्या के निराकरण का इस लेख में प्रयास किया गया है ।

यह निर्विवाद है कि अनेक जीवनोपयोगी कार्य की इकाइयों में छोटे-बड़े सब ही बालक लगाये जा सकते हैं जिनमें सब अपनी अवस्था, शक्ति एवं योग्यता के अनुसार सहयोगी समाज के रूप में काम करके कार्य को सम्पन्न करते है । अपने-अपने स्तर के कार्य के अनुकूल उनकी समस्याएं भी होती हैं और उनके समाधान द्वारा उनको ज्ञान की उपलब्धि भी हो सकती है । यदि यह धारणा मान्य है तो समवायी शिक्षण सामूहिक सहयोगी कार्य करने तथा उनको ज्ञान प्राप्ति का साधन मानने के लिये एक वरदान ही है । इस लेख की परिधि में कुछ प्रत्यक्ष उदाहरण लेकर इस विचार के स्पष्टीकरण का प्रयत्न किया जायगा ।

इस प्रकार के उदाहरण प्रस्तुत करने के पूर्व यह भी आवश्यक है कि इस तथ्य पर भी विचार किया जाय कि किस प्रकार के कार्यकलापों को इन विद्यालयों में स्थान दिया जाय जिनसे सामान रूप से समस्त प्राथमिक शालाओं को बुनियादी शिक्षा की ओर अभिमुख किया जा सके । प्रशिक्षित शिक्षकों एवं पर्याप्त साधनों की प्राप्ति की प्रतीक्षा में समस्त प्राथमिक शालाओं के लिए इस कार्यक्रम को स्थगित रखना इस राष्ट्रीय शिक्षा योजना के स्वास्थ्यप्रद विकास में बाधक ही समझा गया है । इस दृष्टि से प्रस्तावित अनुस्थापन कार्यक्रम के रूप में समस्त प्राथमिक शालाओं में उन प्रवृत्तियों को स्थान दिया जाना चाहिये जो किसी समाजोपयोगी उद्योग की क्रियाओं के साथ भौतिक वातावरण तथा सामाजिक वातावरण से सम्बन्धित है । वास्तविकता तो यही है कि उद्योग की क्रियाएं अन्य दोनों वातावरणों को जोड़ने का ही साधन हैं, किन्तु उद्योग-केन्द्रित शिक्षा की सीमित और भ्रामक कल्पना ने दो तिहाई समवाय के स्वाभाविक क्षेत्र को अछूता छोड़ दिया है जिसमें समवाय की प्रचुर संभाव-

नाएं भरी पड़ी हैं। यदि इन क्षेत्रों की क्रियाओं और अनुभवों का उपयोग किया जाय तो रुचि-अनुसार क्रियाओं के चयन के लिये एक बड़ा भण्डार खुल जाता है। ज्ञान की इस प्रस्थानत्रयी के क्रियात्मक, उत्पादक तथा रचनात्मक कार्यकलापों को उद्योग, स्वास्थ्य, नागरिकता, मनोविनोद, संस्कृति, समाज सेवा आदि से सम्बन्धित विभागों में वर्गीकृत किया जा सकता है। इसके उपविभाग करने पर सैकड़ों की संख्या में कार्य की इकाइयां उपलब्ध हो सकती हैं जिनमें सामूहिक रूप से शाला का समाज भाग ले सकता है और उनका शिक्षा के माध्यम के रूप में उपयोग भी किया जा सकता है।

उदाहरणार्थ एक अध्यापकीय शाला में जहां एक शिक्षक ही प्रायः एक से पांच तक की कक्षाओं को पढ़ाता है वह क्यारी बनाने की एक से अधिक उपक्रियाओं वाली योजना का चयन करेगा। समवायी शिक्षण विधि के अनुसार नियोजन, कार्यान्वय, लेखा-जोखा एवं मूल्यांकन आदि सोपानों के अनुसार अध्यापक सामूहिक रूप से क्यारी बनाने की आवश्यकता का अनुभव कराते हुए बालकों को कार्य में प्रेरित होने के लिए प्रोत्साहित करेगा। सामूहिक चर्चा द्वारा विचार विमर्श कर योजना बनेगी। कार्यान्वय हेतु आवश्यक तैयारी होगी। भिन्न-भिन्न दलों में क्यारी बनाने के समस्त कार्य को इन पांच उपक्रियाओं में विभाजित किया जायगा : (१) क्यारी की लम्बाई-चौड़ाई नापना—कक्षा ४ (२) स्थान की सफाई करना—कक्षा २ (३) क्यारी की मेड़ बांधना—कक्षा ३ (४) क्यारी की खुदाई करना—कक्षा ५ (५) मिट्टी भुरभुरी करना—कक्षा १। इस विभाजन के साथ दल प्रमुख के नेतृत्व में तथा शिक्षक के मार्गदर्शन में कार्य सम्पन्न होगा। कार्यरत छात्रों द्वारा प्रस्तुत समस्याओं का समाधान तथा जिज्ञासा की तृप्ति शिक्षक के मार्गदर्शन द्वारा होगी। प्राप्त अनुभव ज्ञान के साधन होंगे। कक्षा पहली व दूसरी के बालक मिट्टी को भुरभुरी करने तथा घास फूस साफ करने के प्रकरण में जानेंगे कि घास फूस की सफाई से पौधों को अधिक खुराक मिलेगी। मिट्टी को भुरभुरी करने से खाद मिलाने में आसानी होगी, पौधों की जड़ें आसानी से फैल सकेंगी तथा भूमि समतल होने से सिंचाई में सुविधा होगी। हाथ पैरों की सफाई के साथ स्वास्थ्य व सफाई का महत्व समझाया जाएगा। इसी प्रकार पांचवीं व तीसरी कक्षा जो साथ-साथ काम करेगी उनको औजार सम्बन्धी ज्ञान दिया जायगा। कक्षा ४ नाम की विभिन्न इकाइयों तथा क्षेत्रफल आदि का ज्ञान प्राप्त करेगी। कार्य की रिपोर्ट द्वारा मौखिक व लेखी भाषा के ज्ञान में वृद्धि की जायेगी। काम के द्वारा उचित आदतों का निर्माण होगा और सहयोग से काम करने की योग्यता प्राप्त कर सर्वांगीण विकास होगा।

इसी प्रकार दो अध्यापकीय शाला के उदाहरण में कक्षा पहिली, दूसरी

व तीसरी एक के पास तथा चौथी व पांचवीं दूसरे के पास होगी। इस व्यवस्था में सामूहिक कार्य योजना अथवा पृथक योजना द्वारा कार्य करने की स्वतन्त्रता भी रह सकती है। पूर्व की भांति इस योजना में भी सामूहिक अथवा पृथक-पृथक उपक्रियाओं में योग्यतानुसार कार्य विभाजन होगा। उदाहरणार्थ ईंट बनाने की क्रिया में (अ) मिट्टी तैयार करना (ब) तैयार मिट्टी को ईंट बनाने के स्थान पर ले जाना (स) साँचे की सहायता से ईंट बनाना। आवश्यकतानुसार मिट्टी के प्रकार, ईंटों का क्षेत्रफल व नाप का ज्ञान, ज्यामिति आदि का ज्ञान दिया जायगा। इसके अतिरिक्त सहयोग से कार्य करना, स्वावलम्बन आदि अनेक आदतों का निर्माण होगा। बालकों की जिज्ञासाओं एवं प्रश्नों के उत्तरों द्वारा बालकों के ज्ञान भंडार को विकसित किया जायगा। लेखा-जोखा, मूल्यांकन एवं सदवायी ज्ञान के लिए पृथक-पृथक अध्यापक अपनी कक्षाओं के ग्रुप के उत्तरदायित्व को संभालेंगे। इसी भांति तीन शिक्षकों के बीच भी पांच कक्षाओं का विभाजन हो सकता है।

इस प्रकार की शालाओं के लिए निम्नलिखित व्यवस्था उपयोगी सिद्ध होगी :—

(१) मिश्रित कक्षाएं—इसमें एक से अधिक कक्षाओं को मिला कर ग्रुप बना दिये जाते हैं। प्राकृतिक विज्ञान तथा हस्त कार्य आदि का सामूहिक अभ्यास कराया जा सकता है।

(२) मिश्रित विषय :—इसमें कई विषय एक-दूसरे के साथ पढ़ाये जाते हैं। बुनियादी शिक्षा में जैसे उद्योग के सहारे कई विषय पढ़ाये जाते हैं। आधुनिक शिक्षा पद्धति में सम्बन्धित विषयों को मिला देने की प्रथा सी ही बन गयी है जैसे सामाजिक अध्ययन के अन्तर्गत इतिहास, भूगोल व नागरिक शास्त्र हैं।

(३) शाला को एक से अधिक बार लगाना।

(४) कक्षा प्रमुख की प्रथा :—बड़ी कक्षा के बालकों द्वारा छोटी कक्षा के बालकों की व्यवस्था तथा मार्गदर्शन का काम किया जाता है।

(५) एक कक्षा को अभ्यास कार्य देकर दूसरी कक्षा का अध्यापन कार्य करना। उदाहरणार्थ एक कक्षा जब तक गणित कार्य में संलग्न है तब तक दूसरी कक्षा को भाषा पढ़ाना आदि।

इसी प्रणाली को सफल बनाने में निम्नलिखित समस्याएं तथा सुझाव भी हैं जिनका उल्लेख करना अप्रासांगिक न होगा :—

(१) अध्यापकों का चयन :—समवायी शिक्षण के लिए शिक्षकों का चतुर्मुखी विकास आवश्यक है। उनको प्रशिक्षण के साथ पाठय विषयों का समुचित ज्ञान हो, प्रशिक्षण काल में उन्होंने वांछनीय वृत्तियों एवं आदतों का

निर्माण किया हो, विभिन्न कार्य-कलापों में अभ्यास द्वारा कुशलता व प्रवीणता प्राप्त की हो, शिक्षण कार्य के लिए निष्ठावान श्रद्धालु हों, उनमें माता का-सा प्रेम, किसान का उद्योग, वैज्ञानिक की सूझ-बूझ, कलाकार की अनुभूति और तपस्वी की लगन हो।

(२) पाठ्यक्रम :—प्राय: पाठ्यक्रम पुस्तक केन्द्रित है और शिक्षण पद्धति क्रिया-केन्द्रित अपनाई गई है। इसलिए क्रिया द्वारा ज्ञान सम्पादन के कार्य का स्वाभाविक समन्वय स्थापित नहीं हो पाता है।

(३) पाठ्य पुस्तकें :—पाठ्य पुस्तकें अपने ढंग की हैं और शिक्षण-पद्धति अपने ढंग की है। पुस्तकें लिखने वाले प्राय अनुभवी शिक्षक नहीं होते और शिक्षक अपने अनुभव के आधार पर साहित्य का निर्माण नहीं करते। इसलिए नवीन योजनानुसार कार्य की व्यावहारिक प्रणाली पृथक है और उसका पुस्तकों में दिये गये सैद्धान्तिक ज्ञान से सीधा सम्बन्ध नहीं है। पुस्तकों का बुनियादी शिक्षा में स्थान नहीं है, यह धारणा भी भ्रामक है। केवल पाठ्य पुस्तकों तक ही सीमित न रखा जाकर पठनीय पुस्तकों के अध्ययन की जिज्ञासा उत्पन्न करना इस कर्म-केन्द्रित प्रणाली का उद्देश्य है। इसी दृष्टि से प्रत्येक शाला में एक पुस्तकालय भी हो।

(४) समय विभाग चक्र—जिन शालाओं में समवायी शिक्षण की योजना होगी उनमें परम्परागत शालाओं की भांति काल विभाग चक्र नहीं अपनाया जा सकता। एक अध्यापकीय शाला में तो यह समस्या और भी जटिल हो जाती है। इससिए कार्य की इकाइयों तथा उन पर किये जाने वाले ज्ञान के अनुसार ही काल चक्र का निर्माण होगा।

(५) शिक्षकों का मार्गदर्शन :—इसके लिये निरीक्षण विभाग के अधिकारियों का भी इस नवीन योजना से भली भांति परिचित होना और विधिवत प्रशिक्षित होना तथा इसमें विश्वास रखने वाला होना आवश्यक है। समय-समय पर बुनियादी शिक्षा विशेषज्ञों के सहयोग का भी लाभ उठाया जाय।

(६) साधन सज्जा—इस कार्य केन्द्रित प्रणाली में रूढ़िगत शिक्षा की अपेक्षा अधिक सामग्री प्रसाधन की भी आवश्यकता है।

(७) अनुसंधान एवं नवीन खोज :—इस नवीन प्रणाली को गतिशील बनाने के लिए अनुसंधान केन्द्रों की स्थापना की आवश्यकता है, जहां अनेकानेक प्रयोग किये जाकर उनके प्रत्यक्ष अनुभवों के आधार पर परिणामों को एकत्रित करके क्रियाशीलन प्रधान शिक्षा क्रम का निर्माण हो और कार्यकर्ताओं का मार्गदर्शन किया जा सके। इस कार्य में प्रशिक्षण संस्थाएं अच्छा योगदान दे सकती हैं।

(८) वार्षिक योजना :—जब तक जीवनोपयोगी अनेक कार्य कलापों का

चयन कर तथा उनके उपविभागों को उनके विभिन्न कार्य की इकाइयों में बांट कर वर्ष के विभिन्न वातावरण के अनुसार पूर्व विभाजन नहीं किया जायगा तब तक वांछनीथ परिणामों की उपलब्धि संभव नहीं है ।

(९) उचित वातावरण का निर्माण :—प्रशिक्षण काल में शिक्षक उन्हीं परिस्थितियों में काम करने का अभ्यास करें जिनमें कि उन्हें कार्य करना है । प्रशिक्षण काल में भी प्रशिक्षणार्थी गैर-बुनियादी शालाओं में ही समवायी शिक्षण का कृत्रिम वातावरण में अभ्यास करते हैं । उधर बुनियादी शिक्षा जिस नवीन मूल्यों की स्थापना करना चाहती है उससे शाला के बाहर का वातावरण बिलकुल ही भिन्न है इसलिए प्रचार कार्य द्वारा जनता के वांछनीय दृष्टिकोण का निर्माण भी इस पद्धति की सफलता के लिए नितान्त आवश्यक हैं ।

(१०) आदर्श केन्द्रों की स्थापना :—अनुस्थापन कार्यक्रम द्वारा जहां एक ओर समस्त शालाओं को ही बुनियादी शाला का रूप देने का प्रयत्न किया जा रहा है वहां दूसरी ओर यह भी आवश्यक है कि प्रत्येक क्षेत्र में समस्त साधन सुविधा सम्पन्न तथा कुशल प्रशिक्षित शिक्षक युक्त शुद्ध बुनियादी शालाओं का संचालन भी किया जाय जो अन्य समस्त शालाओं को आदर्श प्रस्तुत कर प्रेरणादायक सिद्ध हो ।

(११) अधिक शिल्पों की व्यवस्था :—बालकों की रुचियों में भिन्नता का ध्यान रखते हुए यह भी आवश्यक है कि नवीन शिल्पों का समवायी शिक्षण की संभावनाओं के विषय में अनुसंधान किया जाय और उनकी समावेश क्रिया की जाय ।

(१२) परीक्षा :—समवायी शिक्षण पद्धति के साथ परीक्षा के स्वरूप को भी बदलना आवश्यक है । व्यावहारिक तथा सैद्धान्तिक दोनों परीक्षा पद्धतियों का समावेश होना चाहिए तथा केवल वर्ष के अन्त की परीक्षा पर ही अवलम्बित न रहकर वर्ष के भिन्न-भिन्न भागों में प्रगति के मूल्यांकन का लेखा-जोखा रखा जाना चाहिये ।

अतः उपर्युक्त सुझावों को ध्यान में रखते हुए यदि एक एवं एकाधिक अध्यापकीय शालाओं में समवायी शिक्षण पद्धति को अपनाया जायगा तो अध्यापन में सुविधा एवं सफलता की पर्याप्त संभावनाएं हैं जिसके द्वारा बुनियादी शिक्षा की जड़ को मजबूत बनाने में बड़ा दान मिल सकेगा ।

समवायी शिक्षण सफल कैसे हो ?

सत्यपाल रूहेला

बहुधा ऐसा अनुभव होता है कि बुनियादी पाठशालाओं में सभी आवश्यक सहायक सामग्रियों तथा बुनियादी प्रशिक्षण प्राप्त अध्यापकों के होने के बावजूद भी समवायी पद्धति पर शिक्षण नहीं किया जाता। यह बात नहीं है कि सभी बुनियादी शिक्षकों में उत्साह तथा आध्यात्मिक ईमानदारी का अभाव रहता है। इसका मुख्य कारण उनमें समवायी शिक्षण के सम्बन्ध में कई भ्रान्तियों का होना है। प्रस्तुत लेख में ऐसी कुछ भ्रांतियों पर विचार तथा तत्सम्बन्धी अध्यापकों के कार्यों पर विचार किया जायगा।

कई शिक्षकों के मस्तिष्क में समवाय का यही अर्थ घर किए हुए है कि पाठ के प्रारम्भ में किसी क्रिया और क्रियाशीलन को पूर्ण करा दें और फिर इससे येन-केन-प्रकारेण एक विषय को मुख्य विषय के रूप में तथा अन्य विषय या विषयों को गौण विषय के रूप से गठबंधित करके पढ़ा दिया जाय। इस भ्रान्ति के कारण वे केवल उस विषय के शिक्षण में विशेष परिश्रम व उत्साह दिखलाते हैं जिसे उनकी ही भाषा में 'मुख्य विषय' कहा जाता है। अन्य विषयों को गौण समझने का अर्थ स्पष्ट ही है, उन्हें अमहत्त्वपूर्ण अर्थात् पुछल्ला मात्र ही समझा जाता है। ऐसी स्थिति में समवाय सफल नहीं हो सकता।

अध्यापक प्रायः यह पहले सोचते हैं कि उन्हें क्या पाठ्यवस्तु पढ़ानी है, तत्पश्चात् इस बात की चिन्ता करते हैं कि अब ऐसी कौन-सी क्रिया ढूंढ़ निकालें कि जिससे इच्छित विषयों की इच्छित पाठ्य वस्तु या प्रसंग का किसी प्रकार से भी जोड़-तोड़ कर मेल बिठलाया जा सके। जब उनके सोचने का मौलिक क्रम ही त्रुटिपूर्ण दिशा में है तो वे किस प्रकार सफल समवाय स्थापन कर सकते हैं ?

समवाय स्थापन के कार्य को कई शिक्षकों ने आवश्यकता से भी अधिक सरल समझ लिया है। अतः वे बिना किसी पूर्व सुनिश्चित आयोजन और

From B. T. 4 (3) July 1961

तैयारी के समवायी शिक्षण करने लगते हैं। किसी भी बुनियादी शाला में लेखक को यह देखने को नहीं मिला कि शिक्षक समवायी शिक्षण सफल बनाने के उद्देश्य से सत्र प्रारम्भ होने से पूर्व ही, सत्र भर में आयोजित की जाने वाली जयन्तियों, निर्वाण तिथियों, महत्त्वपूर्ण दिवसों, अन्यान्य सामाजिक व सांस्कृतिक क्रियाशीलनों, प्राकृतिक भ्रमणों व उद्योग सम्बन्धी क्रियाओं की सूचियां रखते हों। एक बुनियादी शाला में एक दिन सुभाष जयन्ती का आयोजन रखा गया। वह जयन्ती छः दिन पहले ही हो चुकी थी। शाला के प्रधानाध्यापक से इसका कारण पूछने पर पता चला कि उनकी शाला में किसी को यह पता पहले न था कि सुभाष जयन्ती कब आयेगी, कल वे पंचायतघर की तरफ से निकले थे, चार दिन पुराने अखबार पर नजर डाली, सुभाष जयन्ती के विभिन्न स्थानों पर मनाये जाने के विवरणों को देखा, उनके स्कूल को भी इसे मनाना आवश्यक था बस इसीलिए भाग-दौड़ में उसका छः दिन बाद आयोजन हो रहा था। स्पष्ट है कि यदि सत्र के प्रारम्भ में ही प्रधानाध्यापक जी व अन्य शिक्षक इतिहास व जीवनियों के पृष्ठ पलट कर देखते तो उन्हें न केवल नेताजी की बल्कि अनेक ऐतिहासिक, धार्मिक, साहित्यिक, व सामाजिक महत्त्व के अग्रगण्य महापुरुषों की जन्म व निर्वाण तिथियां मिल जातीं। ऐसी ही स्थिति प्रायः सभी बुनियादी शालाओं में व्याप्त है। न कोई योजनाएं होती हैं और न समवायी शिक्षण को सफल बनाने के हेतु शिक्षकों द्वारा अपना ज्ञान बढ़ाने के प्रयास।

क्रियाशीलनों के चुनाव में भी भ्रान्तियां बनी हुई हैं। कुछ शिक्षक तो आज भी इतने दकियानूस बने हुए हैं कि वे केवल मूलोद्योग सम्बन्धी क्रियाओं को ही समवायी शिक्षण का सदैव आधार बनाना ठीक समझते हैं। दूसरी ओर विशाल संख्या में ऐसे नए बुनियादी प्रशिक्षण प्राप्त नवयुवक शिक्षक हैं जो पर्याप्त अभ्यास के अभाव में मूलोद्योग के पचड़े में न पड़ कर बिल्कुल स्वच्छन्द, तुरन्त पूर्ण होने वाली 'हल्दी लगे न फिटकरी रंग चोखा आय' जैसी सुगम सहायक-क्रियाशीलन, जैसे चूरण बनाना, कागज के लिफाफे बनाना, पतंगें बनाना, सांचे से ढले मोम के खिलौने बनाना, तार के हैंगर बनाना आदि को ही अपने दैनिक समवायी शिक्षण का आधार बनाना चाहते हैं। फल यह होता है कि दैनिक शिक्षण के बीच न कोई तारतम्य होता है और न कोई घनिष्ठ सम्बन्ध, अन्धाधुन्ध पढ़ाने के अवसर मिलते रहते हैं। इस प्रकार की भ्रान्तियों को दूर करना आवश्यक है। इसके लिए और भी बातें आवश्यक हैं जिनका यहां विवेचन किया गया है।

(१) **समवाय का सही स्वरूप पहिचानें :**—किसी पाठ्य वस्तु को किसी क्रियाशीलन से जबरदस्ती सम्बन्धित करने के प्रयास करने से सही समवाय

स्थापित नहीं हो सकता । सही समवाय में तो बिना वशेष प्रयास के ही कर्म व ज्ञान का गठबन्धन होता चलता है । 'सच्चा समवाय स्वाभाविक गति से परिस्थितियों के अनुकूल अवसर आने पर निर्मल निर्झर के जल की भांति बहता चलता है ।' अतः शिक्षक को क्रियाशीलन के विकास के साथ-साथ स्वतः ही निकलने वाली शैक्षणिक सम्भावनाओं का स्वाभाविक रूप से पूर्ण तसल्ली के साथ उपयोग करना चाहिये ।

(२) **मुख्य व गौण विषयों का भेद दूर करें :**—विषयों का समवाय करते समय एक विषय को मुख्य व अन्य विषयों को गौण समझना त्रुटिपूर्ण है । इस प्रकार का प्रश्न उठना ही नहीं चाहिये । समस्त ज्ञान एक समष्टि है, अतः विषयों के पृथक्कीकरण की भावना को आने नहीं देना चाहिये और प्राकृतिक रूप से पूर्ण तन्मयता के साथ विभिन्न विषयों का समवेत शिक्षण किया जाना चाहिये ।

(३) **उपयुक्त क्रियाशीलनों का चुनाव करें :**—उपयुक्त क्रियाशीलनों को अपनाने में शिक्षण की सफलता अधिक सीमा तक सुनिश्चित हो जाती है । मूलोद्योगों से सम्बन्धित क्रियाशीलन को यथासम्भव अधिकाधिक अवसर प्रदान किये जायें किन्तु आवश्यकता, वातावरण और परिवर्तित परिस्थितियों को ध्यान में रखते हुए सहायक क्रियाशीलनों को भी स्थान देना चाहिए । साथ साथ ही सामाजिक और भौतिक परिवेश का महत्त्व भी समझना चाहिए । प्रतिदिन नयी स्वच्छन्द क्रिया कराना ठीक नहीं है । सभी परिवेशों से उचित परिमाण में क्रियाशीलन चुनने चाहिएं ।

(४) **सुनिश्चित शिक्षण योजना का निर्माण :**—सत्र के प्रारम्भ में ही प्रत्येक कक्षा में कराई जाने वाली क्रियाओं का माहवार विभाजन पर्याप्त सोच-विचार के साथ कर लेना चाहिए । किन-किन महापुरुषों की जयन्तियों, निर्वाण तिथियों, महत्त्वपूर्ण दिवसों, पर्वों व मेलों का आयोजन किन-किन तिथियों को करना आवश्यक है उनकी एक सूची बना लेनी चाहिए । सामाजिक ज्ञान के पाठ्यक्रम में ऐतिहासिक महत्त्व के पात्रों, भौगोलिक महत्त्व के यात्रियों, खोजकों, वैज्ञानिक महत्त्व के विचारकों व प्रयोगकों के जीवनवृत्त व कार्यों का उल्लेख होता है । इनका ज्ञान समन्वित करने के लिए सबसे सुगम तरीका यही है कि सही तिथियों पर उनकी जयन्तियां या निर्वाण तिथियां मनवाई जाएं । ऐसी महत्त्वपूर्ण तिथियों का संकलन करना सुगम कार्य नहीं है—शिक्षकों को इसके लिए बहुत छानबीन करनी पड़ेगी, स्थानीय, देशीय व अन्तर्राष्ट्रीय कलैण्डरों, इतिहास के ग्रन्थों, जीवनियों, पुरानी पत्र-पत्रिकाओं के पृष्ठों को उलट-पलट कर काम का मसाला एकत्रित करना होगा, और फिर करना होगा उसका माहवार विभाजन । जलवायु और स्थानीय परि-

स्थितियों से सम्बन्धित पूर्व अनुभवों के आधार पर यह योजना बना लेनी चाहिए कि किस माह में किन-किन प्राकृतिक स्थानों का भ्रमण करवाया जायेगा, कौन-कौन-सी औद्योगिक क्रियाओं को करवाना ठीक रहेगा, कौन-कौन सी फसलें किस माह में बोयी जायेंगी व काटी जायेंगी, कब कपास धुनवाना ठीक होगा और कब कताई करवाना, शाला भवन की सफेदी व रंगाई छात्रों द्वारा करवाने का उपयुक्त समय किस माह में आवेगा, कब अबरी व कार्डबोर्ड की फाइलें बनाना आर्थिक लाभ की दृष्टि से ठीक रहेगा, नींबू का अचार कब बनवायें, हैजा रोकने की गोलियां किस समय बनवाना ठीक रहेगा, आदि।

इस प्रकार जब पाठ्यक्रम की समस्त क्रियाशीलनों की माहवार विभाजन योजना शिक्षकों के पास तैयार हो जायेगी तो फिर उसके आधार पर समवायी शिक्षण करना एक सुगम व सफल कार्य हो जायेगा।

(५) स्वाध्याय करना आवश्यक :—समवायी शिक्षण की सफलता के लिए शिक्षकों को सन्दर्भ ग्रन्थों, जीवनियों, सहायक पुस्तकों, पत्र-पत्रिकाओं और दैनिक पत्रों का नियमित रूप से अध्ययन करना चाहिये। समवायी शिक्षण पद्धति पर आधारित पाठ्य पुस्तकों व उपयोगी पथप्रदर्शक ग्रन्थों के अभाव में इस कार्य की बड़ी भारी आवश्यकता है कि शिक्षक स्वयं अपनी छानबीन, स्वाध्याय व सकलन प्रवृत्ति के फलस्वरूप उत्तम नोट्स तैयार करते रहें, समवायी शिक्षण सम्बन्धी अपनी कठिनाइयों, सफलताओं, या मोटे तौर पर अपने अनुभवों का लेखा रखते रहें।

इस प्रकार परिश्रम व श्रद्धा के साथ एक वर्ष तक समवायी शिक्षण करने पर शिक्षक यह पायेंगे कि इस पद्धति पर शिक्षण करना न केवल प्राकृतिक, सुलभ व सुगम प्रतीत होता है अपितु बालकों व शिक्षकों दोनों को इसमें बड़ा रस आता है, बड़ी रोचकता प्रतीत होती है तथा बालकों की ज्ञान पिपासा जागृत होती है। उनमें एक नवीन स्फूर्ति व नयी चेतना का संचार होता है।

PART II

CENTRES OF CORRELATION

TEACHING THROUGH ENVIRONMENT IN THE URBAN BASIC SCHOOLS

D. V. CHICKERMANE

Use of environment as a medium of teaching has been an important feature of Basic education. It is in this way that the school is linked with the society around. In traditional type of schools, teaching was centred round books and the use of environment was ignored. This led to make school work dry and mechanical. One of the aims of education should be to bring the child in direct contact with environment and make him appreciate its place in the building of the society. This prepares the child to take his appropriate place in the society. Environment supplies all necessary motives for school work and makes school work interesting and useful to the child.

The two aspects of environment commonly dealt with are physical and social. The former relates to natural resources and their uses made by man for the welfare of the society. This would include plant life, animal life, human life and physical forces as electricity, rain, light. The school subject closely related to this aspect of environment is known as general science. It includes practical applications of physiology, physics, chemistry and biology. In Basic schools, the contents of the syllabus of general science should be determined mostly by the physical environment. The physical environments in urban and rural schools differ in some respects. In rural areas, pupil will see nature, hills, rivers, trees, gardens and farms. In urban areas, in the environment will be found factories, mills, workshops, use of electricity in homes, etc. As such the general science of rural schools will include in it emphasis on

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nature study, botany, zoology and agriculture. On the other hand, the general science syllabus of urban schools will include machines, big industries, electricity and its uses, generation of power etc., thus laying greater emphasis on mechanics, physics and chemistry. We should think both the environments—urban and rural—complementary to each other so that a boy from rural schools will visit often urban areas and make up what is not found in his environment, as much as children from urban areas will visit rural areas and learn directly from nature, biology and agriculture.

The other aspect of environment is society. This would consist of the institutions formed by the society for its administration and welfare. The study of this environment will relate to the school subject popularly known as Social studies. This subject includes history, geography and civics. Through this environment, the child becomes acquainted with the mode of local administration—bodies like the Panchayat of the village, District Board, State Legislatures. Through celebration of nation days and days of heroes, the child studies history. A study of efforts of man to use physical resources for his welfare leads on to geography. The social environment will guide the syllabus in social studies in schools, as much as the physical environment leads to the syllabus in general science. The social environments of rural areas and urban areas differ to some extent and this may give rise to some differences in the syllabi. But as rural areas together with the urban areas form part of one adminstrative unit, there need not be radical differences in the social environments and the syllabus in social studies for urban and rural areas.

We can now refer to some of the special topics which can be very well taught through environment in urban Basic schools. Electricity is now commonly found in urban areas and several homes. As such its use in various appliances for lighting, heating, transport and domestic purposes can be taught with reference to life situations. Bicycles can be taken as another illustration. Many pupils in urban areas use bicycles. The mechanics of bicycles will be a good introduction to the study of mechanics. Other scientific devices commonly found in urban areas are Stoves, Thermos flasks, Thermometers, steam and electric cookers, Photographic cameras and film projectors. All these will have their share in introducing general science to pupils through environment. Radio will also play a very important part in urban Basic schools.

News reading and news writing will be a daily feature in all urban Basic schools, where necessary important news will be shown in their geographical background. This activity will lead on to a study of Civics and Geography. The urban Basic school will observe the national days and local religious festivals. They may also observe days in memory of national leaders, writers and scientists. The programme of these observations will include dramatics, projects like manuscript magazines and discussions and talks in which students will take a leading part. Thus the subject of social studies will be made a subject of living interest. Urban Basic schools will have in them elections and ministers to look after school activities, clubs and associations. There will be greater facilities for urban Basic schools to organise trips and educational excursions due to availability of transport and location of industrial centres in the neighbourhood.

It may, however, be noted that teaching through environment will be through a series of projects which will be organised by pupils. The school will have to prepare a list of such projects at the beginning of the year. This may be included in the programmes of work of the school. Pupils will take an active part in planning the project and collecting the necessary materials and equipment. They will carry out the project as a group effort and in the end there will be an assessment of the project. This will include the educational utility of the project. School work through such projects will not only enrich the academic subjects, but will infuse enthusiasm and interest in the hum-drum routine of the modern schools.

INTELLECTUAL BACKGROUND FOR CORRELATED TEACHING : SOME EXPERIMENTS

P. N. SEMWAL

The experiments described below have no pretentious claims of breaking new grounds in the practice of Basic education, They are modest attempts at giving a grounding in the technique of correlation to the teachers under training and improving them intellectually for effective teaching through this method.

It is a common experience to those who are engaged in teacher training at the Junior Basic level that in a class-room situation an average practising teacher is not so much baffled by the problem of how to teach as, what to teach. In the context of one year's duration of training course, which is the background of these experiments, this problem remains generally un-solved through out, as most of the time is occupied by craft-training, study of pedagogical subject and several other activities and as a result, there is hardly any time left for improving the intellectual background of these teachers in the making. Further, the academic attainments of these raw matriculates are generally too superficial, factual and shallow and therefore, far from satisfactory from the point of view of small children for whom they are called upon to give lessons. This necessarily makes their lessons a humdrum presentation of crammed up dry facts and abstract principles inspite of correlated method.

Teaching through correlated method presupposes a well informed teacher having a rich fund of knowledge about familiar facts and phenomena of life and nature around. But these

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teachers having a limited intellectual range, have a tendency to draw on the subject-matter that he studied at the matriculation standard, for the knowledge-contents of their lessons especially in social studies and general science. As for example a lesson on Tea or some agricultural product would consist mainly in mentioning the places of its growth, soil and climatic conditions for its cultivation etc. etc. Such factual information is hardly appreciated by children in elementary classes. The correct approach to these lessons is to present and emphasise the various processes and human activities involved in the cultivation of these products. Not un-often a teacher in his endeavour to level down the standard of his lesson to suit the mental growth of the children, makes it too simple, shallow and even short. The reason for all these defects is obviously the limited range and depth of the knowledge at the command of the teacher.

Study Circles

With a view to overcoming these defects as far is possible within the limited time at disposal, a scheme of extensive reading of suitable library books was planned at the out-set of the session. A set of eighty books on a variety of subjects specially on social studies and general science, each book having 50 to 60 pages was selected. The number of books selected corresponded with the number of trainees in the school. The trainees were divided into eight reading groups each having ten members and each group was assigned ten books with the stipulation that every memmber should read one book daily and prepare a small precis of the contents of the book gone through. The group leader was to ensure the un-interrupted circulation of books among its members. The daily movement of the books from one member of the group to the other was not to be interrupted by the failure on the part of a member to read a book due to illness, absence or the like. Thus in ten days every member completed reading ten books. Each group was also put under the charge of a teacher whose main duty was to check up the summaries prepared by the group members. The association of a teacher with each group also acted incidentally as a deterrent to the slackers and the indifferent.

After every ten days each group passed on the books to the next one in a period of eighty days, the circulation was completed, thereby enabling every trainee to read compulsorily as many as eighty useful books.

This reading plan equipped trainees with such subject-matter as they generally needed for their lessons. It also orienated their approach to the selection of appropriate contents for their knowledge lessons. Needless to emphasise that if a teacher has adequate knowledge of a topic at his command both selection of subject matter and its presentation suited to the age group, become easy and natural. Besides, this plan kept the trainees fruitfully occupied during their spare hours in the hostel as no periods were provided in the school time-table for this purpose. This was also a welcome step from the point of view of initiating them from the beginning of the session,into the regular reading habit.

Preparation of source books

The above experiment was followed by under-taking another project which was also calculated to give them further background material for improving their teaching through correlation. This project related to the preparation of source books by the trainees The project was planned in connection with Basic Education Week Celebrations held during January last. Several topics having a direct bearing on the curriculum prescribed for the Junior Basic schools were suggested to the trainees and each one was asked to select one of them for writing a concise book on it for the guidance of a teacher. They were suggested reference books, journals ond other source material for collecting information needed for compiling these books. They could also utilise the information they had collected from books gone through in reading groups. Some of the topics related to the social customs and institutions peculiar to Himachal Pradesh. For these topics they had to draw on their own knowledge as there were no references easily available to them. The quality of booklets thus produced was as good as could be expected from matriculate teachers of varying capacitites and it was, therefore, to be judged by their standard. Experience, however, showed that with more careful planning and labour and devoting a little more time, such projects not only can produce useful literature, but have also the capacity of giving a new directon to the trainees in understanding the practice of Basic education.

Charts on Integrated Training Plans

The experiment was further extended by making these booklets, among other library books, source material for preparing charts containing integrated teachings plans based on orientation activities. These charts were also planned to be prepared for an exhibition held during the last Basic Education Week. Since the main theme for the last Basic Education Week Celebrations was orientation of elementary schools, several facets of orientation programme including working out the details of the orientation activities through these charts, formed a part of the programme planned for these celebrations. Each chart contained the details of (i) the organisation of an activity and (ii) integration of knowledge-contents of various subjects that could lend to an easy correlation through that activity for a particular class. Each trainee was required to prepare at least one chart. Quite a good number of charts was thus prepared and some of them were of good standard. These charts and booklets were displayed in the Basic Education Week Exhibition. Teachers and other visiting the exhibition evinced keen interest in these charts and booklets and found them helpful in understanding the approach to teaching and learning envisaged in Basic education. But more than this these projects when completed, proved immensely useful to the trainees themselves. Not only could they utilise the rich material produced by their collective efforts for their own lessons, but also had a better appreciation of correlated method and necessary intellectual background for its effective practice.

The above scheme of work which was followed as a continuous and interlinked process was undertaken out-side the framework of the prescribed syllabus. But as will be evident from the above account, it very much helped to promote one of the most important curricular objectives at the teachers training level. Besides, it gives a feeling of confidence to the sponsors of the experiments that if such projects are planned and pursued more methodically, they can yield better results.

LOCAL ENVIRONMENT—A SOURCE OF EDUCATION

K. S. ACHARLU

Now that it has been decided that the pattern of education at the primary school stage should be of the Basic type, the question of bridging the gulf between the traditional kind of schools and the Basic schools, till all education is reconstituted along Basic lines, is engaging the attentton of the educational administrators.

The two pamplets published by the Ministry of Education* on the reorientation of elementary education offer valuable guidance in this matter. They suggest the adoption in the traditional schools of a pattern of practices and well-defined directions of procedure which have been successfully worked out in Basic schools as a first step to bridge the gulf between the two. These educational practices, it is thought should no longer be the exclusive heritage of Basic schools. In addition, it is desirable that the teachers and the administrators should put themselves into the proper receptive mood for appreciating and developing an insight into the right attitudes and values which are fundamental to Nai Talim.

In the full-fledged Nai Talim schools, education is dynamic and life-centred. According to Gandhiji, "Education covers the entire field of life ; there is nothing in it, however small, which is not the concern of education." This means that all aspects of a healthy and balanced life form the medium of education. The practice of clean and healthy living, the prac-

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*Ramchandran, G. *Orienting primary schools towards the Basic pattern.* New Delhi : Ministry of Education Govt. of India

Basic activities for non-Basic schools. New Delhi : National Institute of Education.

tice of working for self-support in food, clothing and shelter, of developing habits of cooperation and neighbourliness and those of recreational and cultural activities become the most natural centres for the cultivation of effective skills, habits, attitudes and knowledge. But an individual's life is always associated with and is a part of "a social unit, a context, an environment." The curriculum of the school, says the Central Advisory Council, England, should be so designed as to interpret the environment to the boys and girls who are growing up and make it an effective part of their knowledge.**

Environment has two phases, natural and social, and Nai Talim places high premium upon both these phases of environment. Through them the pupil feeds his natural curiosity and obtains intellectual and aesthetic satisfaction. He discovers and interprets the world he lives in, broadens his interests and develops scientific ways of thinking.

The paper attempts to offer a few suggestions on how even in the traditional pattern of primary schools the study of the immediate natural environment constitutes the point of departure for much of the educational process. In the curriculum of the primary schools there is even now provision for some sort of study of the natural and social environment by "a grotesque rigid division into competing subjects," largely confined to the reading of a few text-books and listening to lectures. But it is hardly realised that one of the most valuable opportunities for enriching the pupil's knowledge through living contact and understanding with the natural environment around, is lost by the dull and lifeless textbook methods of the classroom.

The primary school teacher should snatch for himself the right to be free to abandon the shackles of the text book and examinations and lead the children away into the farm and the field, garden and thicket, streams and woods, and provide the thrill of the vast and boundless starry firmament, and the ineffable joy of the dawn and the sunset. The experiences and explorations in the "outdoor laboratories" should not be measured in terms of text book requirements or obtaining a certain minimum of marks in the examination. Instead of

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***School Life*; H.M.S· offiice, p. 40.

filling the minds of children with "inert ideas" let us take them into the heart of things and life around and give them the vision of truth.

Every school is located in a natural environment which should serve as a jumping-off place for meaningful activities, experiences and experimentation, observation and acquisition of scientific knowledge.

We may for convenience sake analyse the study of the natural environment under the following heads :

(1) *Relief* : The children take a walk round the region and observe the ups and downs, the slope or flatness plains and fields, the course of the streams and springs, formation of pools and tanks and the situation of the hill tops and the valleys. The making of a sample relief map of the region will serve as an excellent starting point for local geographical studies, practical geometry and arithmetic.

(2) *Rocks and soils :* In their wanderings pupils observe and collect different samples of rocks, soils and sands. A deep gully in a field or a railway cutting will reveal to them the rock layers and soil under the surface and how man uses materials from the earth. A quarry nearby will introduce the children to the hidden treasures of the earth. Every child may make his own collection of specimens of rocks and soils for the school museum and collectively the class may identify, and classify the samples and study their simple characteristics with a magnifying glass.

Experiments of breaking and burning the rocks, separating the layers, testing the rock samples, shaking up the soils in water and observing the sediment afford purposeful activity and endless joy.

(3) *Weather :* Children living in the rural parts will not have missed observing the glories of the early dawn, the wonderful colour effects of the Eastern sky before the golden ball of fire bursts from the unknown and the marvels of the sunset. It is a man-made tragedy that millions of children in metropolitan cities are blissfully ignorant of these rich treasures of delight. The position of the rising and setting sun in the horizon, its apparent motion from the North to the South and South to the North with a noticeable regularity and its relation to seasonal changes, the lengthening and shortening of the

shadows as the sun moves up the sky, the relation between the sun's position in the sky and the warmth and heat we experience—all these lend themselves to an extremely interesting course of experiments and discussions which form the basis for later scientific studies on heat, light and shadows.

Measurements of temperature may not be possible in every school, but primary school pupils should be able to identify whether the day is cool, warm, hot or very hot, and formulate estimates of temperature for all the months of the year.

Many and varied opportunities during the year present themselves to the children to experiment on the wind, its velocity, its direction, its relation to the domestic life of the people in the garden, on the threshing floor, at home in games, during journeys on foot or in vehicle to the rising of dust and to moving clouds, thus making the observation and studies meaningful.

Every parent is aware how difficult it is to restrain a child from enjoying a bath in the cool, refreshing showers of rain, specially after the dreadful experience of the sweltering heat of summer. Heaven's grace on humanity hath not a more merciful example. No natural phenomena is so highly enjoyable and rich in educational possibilities as those of before, during and after rains, and a school that does not make use of these experiences has neglected a golden opportunity. The gathering of clouds, their peculiar shapes and appearance, the roar of thunder and the flash of lightning with often times a short interval between them, the gentle showers and the torrential downpour and the hail-storm, the wearing of top soils in the fields and plains, the running of streams down the hill valleys, the formation of pools and the damming of muddy water in tanks—how full of treasure is this open sesame of knowledge.

Every school may not be equipped with a rain-guage but pupils can certainly estimate whether the rainfall during a day or a week is poor, moderate, heavy or very heavy and discuss its effect on the life of the people at home, in the field and factory and in the occupations of trade and transport.

(4) *Plant, animal and insect life :* No child can be blind to the fact that one gentle shower transforms the parched plains into smiling stretches of green. Every region has its own

peculiar types of vegetation. The teacher and children should be able to survey the region and identify the varieties of trees, bushes and common herbs and study their characteristics and usefulness for the community. The effect of sunlight and shower on plants, the seasonal changes in leaf, flower and fruit, the scattering of seeds, the various adaptations which plants make to their environment make interesting studies.

Plant life is intimately related with bird life. A study of the different kinds of birds that inhabit the school region provides joyous experience. It would be worth while for the pupils to lie down and watch under the shades of trees or hide near bushes and observe the habits of birds without disturbing the rhythm of their life. In this connection it would be well to remember that the pupils should on no account be encouraged to steal bird's nest or eggs or snare them for caging purposes. Education consists also in cultivating the right attitudes towards plant and animal life.

Are not children (and even grown-ups) transported into delight by the marvellous beauty and colour of wings and the captivating sweetness of tunes of seasonal visitors ? The habits of birds are as varied and interesting as those of humans ; they build nests with extraordinary skill and aesthetic taste ; they gather together in the face of danger and the approach of an enemy and cooperate in a manner which puts human beings to shame.

The primary schools should be familiar with the birds of the region, their names, habits, habitats and peculiarities of performances. The pupils' sketch books should be a valuable record of drawings and observation. Often times the so-called illiterate village peasant will have to be approached for giving accurate scientific information on local bird life.

Apart from birds every region supports other animal life which the primary school may find difficult and perhaps dangerous to contact. Nevertheless, most children are familiar with the howling of the jackals at night, the crooking of frogs and toads and if woods are close by the bellowing of herds of deer and the cries, of other wild animals. In the rural region especially, there is no scarcity of reptiles, and other helpful and harmful animals. And as for insects there is no end to the thousands that cluster around glaring lights, crawl along the earth and on twigs of trees and fly from flower to flower.

(5) *The Heavens :* The story does not end here. Who is the child that is not filled with awe-inspiring reverence at the broad expanse of the dark blue-sky studded with millions and millions of bright and brilliant stars ? No child who has gazed with unquenchable wonder at the heavens on dark days can forget the patterns of the constellations like those of the Saptarstri Mandal, the Dhruva, Matsya, Sharmista, Mriga Vyadha, Vrischika and Trishanku, the picture of the moon near Rohini or Chitra. To identify the twenty seven stars of the calendar and be able to observe the phase of the moon over the period of a lunar month, and to follow the paths in the sky of the planets Guru, Mangala and Shani lay the foundations for discipline in scientific observation.

Mapping out star-groups, sketching the waxing and waning moon, keenly observing from day to day the position of any one star rising in the East, measuring the latitude of the place of by simple appliances, measurements with shadow poles and many more educational activities of the kind would open a new world of ideas before the pupils. And what of the profound joy in listening to the legendary tales in literature of Dhruva, the steadfast devotee, of Sharmistha the humble queen, of Devayani, the proud daughter of the sage Shukracharya, of Brihaspathi the Wise, of Vasistha and Arundhathi, the Divine pair. No wonder that the best poetry of the world is inspired by the heavens.

Frequent excursions into the neighbourhood, field trips, observation, collection of specimens, laboratory experimentation, art work, self-study, class discussions and lectures, preparing reports and charts—are some of the educational procedures which may be practised in schools to organize the vast experiences derived from contact with the natural environment. But this implies a fundamental “change of design.” The boundaries between subjects should be erased and the artificiality of traditional divisions of subject matter should be discarded. The Nai Talim method is to shift the emphasis from subject matter to the growing child and to help him to develop a healthy relationship between himself and the environment through actual experiences and assist him in the full development of his personality.

This paper does not pretend to present a full treatment of the problem. Persons keenly interested in the study of the natural environment will be able to suggest many more things which pupils of the primary stage can profitably explore and learn. In fact, not much has been said about the knowledge aspect of these experiences which depend mostly on the teacher's competency in planning, his creative imagination and desire to learn along with the pupils. But one thing is certain. If the study of natural environment should have meaning and purpose, teachers should break away from limitations of the academic curriculum, the instructional technipue and refuse to be cramped by over-emphasis on static text books and standardized examination systems. One of the greatest gifts of Nai Talim is this promise of freedom to the teacher.

CHOOSING CENTRE OF INTEREST

P. N. JOHNSON

What are our children interested in? What are our town children interested in, and what, if left to themselves, do they think about, play about, talk about?

Since Nature has given children the gift of childhood and the tendency to choose and do the things that will best equip them for life, it seems strange we are so busy going about trying to force children into a pattern of life that is contrary to Nature—a pattern of learning and doing things that we grown-ups choose, of suiting in unnatural ranks and following an unnatural time-table of our selection. We refuse, in fact, to be guided by Nature and the children's own preference.

The Genius who gave us Basic education appreciated this need to get education more true to life, more fitting to the child's needs and interests. For the vast number of India's children, against their background of village life, and in the light of their main interests in the soil, and in spinning and weaving and country crafts, the pattern of our Basic schools has been evolved centering round the Charkha and the loom and the vegetable plot. But now we must face up to the fact that for many of our town children these are not the fundamental needs at all. We should be looking elsewhere for the motive interests of a child's natural activity. What, we ask again, are our town children interested in?

In one respect all children the world over are the same, Indian and English, American and French and African. They are interested in doing things—in using their fingers for constructing and designing; in exploring and experimenting and finding things out; in imitating and acting and imagining. No-

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body who has got so far as to read this journal will deny that. The first place in every day must literally be given to making and doing and experiencing rather than to formal classroom work. This is Nature's way. The children who come to school are bubling over with ideas that they wish to express, and a great urge to get busy and really cudgel their brains to invent to work out, to create, to express. And in the creating and expressing and doing they are learning, far more than they would be if we put them solemnly down to work sums, at our dictation or 'learn lessons as we say, under our direction.

Thus far, then, in town school and country school, there should be the same pattern. The children start the day in some natural, purposeful, interesting activity which, if carried through to completion gives the child a full sense of satisfaction in achievement. But where lies the difference, between the town and the country child ?

It is, surely, in the selection of the activity. Our town children do not see their parents spinning and weaving, will never themselves develop that deftness of finger to be good spinners and weavers, Perhaps, you will say ; but all children are interested in clothes, and all children are interested in the origin of things and in the crafts of our Motherland. Even in England, junior classes have taken part in spinning and weaving projects, and have loved it, from the gathering of the wool from the sheep farms, through the cleaning and dyeing and carding, to the finished article. And so, still more, will our children, town and country alike ; for weaving is a very part of our tradition. But this activity, I believe, should take its place among others. There are so many things the child of the town wants to know and do that centres of interest can be varied term by term, month by month, year by year from all the pattern of a town child's life. It rests with each school, each teacher even, to watch and discover the children, to find out from themselves what their interests are and what they most long to do. Watch them at play ; see what they draw ; listen to their conversation ; give them free material and see what they construct.

Here, then, are some of the topics that are discovered to be interesting to children.

Firstly, they are interested in travel. The modern age is intensely interested in travel—destination, the moon ! Children going on a train journey drag reluctant parents down the platform to look at the engine. They know how to drive Father's car long before they are allowed to do so. They can manage a tonga pony, and their drawings are full of ships. A travel project provides a rich stores of subjects in History and Geography from Phoenician trading vessels to rockets, from sleighs to catamarans, of explores and conquerors and the harnessing of steam. There is one point in which a travel project may be questioned : we may not be making saleable articles in our handwork time. It is not the object of this essay to argue the importance of the profit-making aspect i but to some people this is an important part of Basic education,

Handwork there will be ; an exhibition of transport old and new may be built up ; it is possible that we may make attractive model ships of sufficiently high standard for selling, But there will also be much other work to do of equal importance educationally, such as books to compile and bind, composite pictures to build up, sand tray models to set out.

Then, children have always been interested in animals. The centre of interest may be the Zoological gardens or the pet shop or the keeping of domestic animals or poultry. Children's preference for animal stories is well known ; they often seem to understand animals better than we do. So in history we discover how animals have figured in the history of mankind ; our Geography lesson takes us in imagination or reality to farm, to jungle, to desert and mountain in search of animals. And what shall we make ? Besides modelling the zoo and its creatures, we ceuld make a Noah's Ark with all its company. We might, moreover, keep and breed rabbits or fowls or guinea pigs or budgerigars for profit, making their hutches or houses ourselves, and caring for them and cleaning and feeding them daily,

Thirdly, I would suggest some form of dramatics. There are, for instance, signs of a revival of interest in puppety lately. The making of the puppets calls for a degree of skill and imagination and satisfies the child's delight in dolls and toys. The child's natural gift of mimicry makes all kind of acting acceptable. A story, historical or otherwise, which children have acted or made their puppets act, they will remember.

And how we search for the historical or geographical detail in planning the costumes and scenery ! It may be that the putting on of a performance will prove a source of income; in any case the finished performance will prove thoroughly satisfying to the young actors; and many of the school subjects will be found to be drawn into play their part in the completion of the project. In the Art lesson the programmes and scenery are designed, in Arithmetic the costs are worked out, and seating numbered. The composition lesson may actually see the script of the play put together.

The three basic interests of children have been said to be food, clothing and shelter. If we apply these three to the town child we find plenty of suggestions for centres of interest beside the traditional ones of weaving and agriculture. Needlework or knitting gives plenty of scope for handwork, and the objects made may even reach a standard at which they can be sold or used for gifts. As a centre of interest these crafts lead one on to the history of clothes, and the fascinating geographical variations of clothes.

Gardening is of such educational value to any child that even if the garden is limited to a few potted plants on the verandah, it is worthwhile. The importance of gardens in a town, the reason for the building of the fine gardens of the Moghals, the study of soil, of sun and shadow, are only a few of the topics that arise from our interest in gardens.

But another interpretation of the 'food' interest could be found in shops and bazars. Perhaps the children can have the valuable experience of helping with a small tuck shop in the school. Whether in our own tuck shop or in the shopping centre, 'shop-window geography' takes one out to field and farm and orchard, and across the seas to the source of Danish butter and Australian jam, and to the great ports to study exports and imports. In handwork we can build our shop and stock it with further goods than the 'eatables'. We can design posters and price tickets, boxes and wrappers. Or a model may be made of a dock, a farm, a tea estate, an apple orchard.

Then there is what we may term the topical interest. The circus visits town, and the children's minds are occupied with entertainments through the ages, or the countries from which the circus artists come; and their hands are occupied with constructing a Big Top and the performers within it. Or else, one of the great festivals starts the class on research into festivals of our land and of other lands, and into tradition and folk-lore. Or yet again, an item in the news or a film showing at the cinema will arouse an interest in some other age, or some other country, and set our fingers busy on the compilation of a class newspaper or history book. And that leads me to yet another important consideration when choosing centres of interest for our sophisticated town child, which we must now mention.

Our children are the citizens of the modern world—nay. I might say, citizens of the future. We may not put the clock back, however we may look at the future with foreboding. Our children are growing up into a world of radio, cinema, air travel, of space travel rather, and of science. Therefore, their chosen constructive work may be the making of a cinema, more of less scientific and realistic according to their age and the ingenuity of children and teacher. Or it may be Rockets, or Radio, and the getting up of radio programmes, or an airport.

The teacher, so long as he or she is prepared to explore and experiment with the children, must find these new and modern interests far more stimulating and alive than any following of formal text-books and syllabuses.

No consideration of centres of interest is complete without the indisputably vital local study of our town or city. Within this centre is included all the study of men and buildings, of local government and essential services, of marketing, of gardens, of transport, that make up the life of our own town. And for Handwork ? For the ambitious, a floor model of a part of our town. Or it may be that the class works towards an exhibition of some of the crafts practised locally, as attempted by ourselves. Or else we set up a variety of shops, and stock them with goods, or construct a hospital or a school, or a post office or a railway station.

Here, then, we have a list of some dozen or more centres of interest from which to choose, with the guidance of the children, and with which to keep our teaching alive and varied. The list even now is not exhaustive, and each topic has of necessity been very hastily dealt with. We could suggest further more the Post, or Cooking or Baby-craft. But whatever is chosen, there are certain essential considerations to bear in mind.

The first of these is, that the centre chosen must suit our own children. The age, the background, the inheritance of culture and of brain will vary, and therefore each teacher, each school must choose with intelligence and their own particular children in mind.

Secondly, we must remember that though correlation with all the subjects on the time-table is our aim, yet that correlation must not be forced. If the centre of interest does no more than to wake children up and make them come alive, it will have been worthwhile, even though it correlates with no other subject on the time-table. But what will happen in fact is that the centre of interest, the excursions we make, the models and the craft work, the acting and art, will demand—yes, actually demand-attention in the other subject periods. We find that we need to borrow the writing period to write our book or our play or our notices. We need the Arithmetic time to make up our accounts, and our English time to learn how to draft our letter to the factory or the farm. We need the Literature period to tell and retell the story we had promised, on the topic; and the Nature time is essential for finding out by our own efforts and observation how cotton or sugar or tea is grown.

The third point to make is that once the work is well launched the children will not all be doing the same thing at the same moment. There is the infinite variety of 'jobs for everyone' and always a new job cropping up for someone. They learn from their own personal responsibility; they learn from each other's experience.

But perhaps the most important thing of all to remember is that this appeal to the environment and interests of our children, this attention to connection and correlation of ideas, this emphasis on construction and activity are all based on the realisation of the psychological needs of the child, and of the fact that true education is not a feeding with knowledge and facts, so much as the development of a personality, the encouraging of self-reliance and initiative, of social sense and a true and lively interest in the world around—in short, the making of good citizens of our land in our modern age.

CELEBRATION IN BASIC SCHOOLS

S. P. MANKIKAR

Celebrations from an integral part of the community life activities in Basic instructions because they are a rich source of social experience and training in civic understanding. The festivals that are observed by people in India do not only influence the moulding of a child's personality but can act as a medium of education—social, moral, aesthetic, emotional and even liberal. They also afford abundant scope for correlated teaching which is the best method of instruction, as it envisages unity between life and education. One cannot be divested from the other; it would be suicidal to do so. Experience, action and knowledge should evolve as a well-knit entity.

Asia is a land of religions. Though originally India has been the land of the Hindu religion, today it has a land of the people following various faiths viz. Islam, Buddha, Parsi, Christian and the like. Our government is a secular one and has been following the set of principles known as "Panchsheel" in its foreign policies. The Sovereign Democratic Republic of India has granted all the fundamental rights to every citizen of the country. We now aim at developing the child in such a way that he becomes a useful and responsible citizen of the nation. In the methodology of Basic education, we have to bring about this development in such a manner that this evolution is accomplished through the three centres of correlation, namely, society, craft and nature.

Festivals and the relevant celebrations are vitally connected with these centres, as will be seen from the subsequent classification. A child grows in society and is influenced by nature.

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The basic needs of a man viz. food, clothes and shelter are provided by nature in the shape of raw material. It is through his skill and craftmanship that man leads a happy life after working over this raw material. He cooks the food and prepares delicious dishes, weaves beautiful cloth having attractive colours and designs and builds beautiful mansions and houses to live in. At the same time, he follows a certain faith, devotes himself to it and expresses his gratitude to God, who bestows all these blessings. Many a festival is, therefore, religious, but in its celebration more stress is laid upon music, joy, expression of devotion and gratefulness towards God. Other categories may be enumerated as those connected with the seasons, harvesting as the Makar Sankrant, Sharad Poornima or Kojagiri, Vana-Mohotsava, the Pongal and Onam and the Adi festival that are celebrated in South India; the third pertains to national rejoicing as the Deepawali, Dasara, Holi, Id-i-milad, Christmas etc.; the fourth being the National Days as the Independence day, the Republic Day and observance of human Rights Day, U.N.O. Day, the Children's Day and Nehru Jayanti (together), Flag day etc. Now-a-days certain weeks as the Prohibition Week, Basic Education Week, Small Savings Week, Plan Week and so on are also observed; fifthly the birth days (Jayanties) or 'Punyatithis' of Great Men and National heroes are celebrated as those of Lok, Tilak, Mahatma Gandhi, Buddha, Mahavir, Ramdas, Dyaneshwar, Namdeo, Ramkrishna Paramhams, Vivekananda, Mohammed, the prophet, Christ and the like; and lastly those connected with the 'literature when their works, their contribution to the literature along the lines of "Antar Bharati", an idea that was mooted by Late Shri P.S. Sane alias Sane Guruji may be discussed. It may prove useful in bringing about mutual understanding and lead to comparative study of literature from a national point of view.

The celebration of a number of these belonging to various categories afford most potent opportunity to exploit the situation for educational ends. They offer abundant scope for organisation of suitable programmes and activities and cater to the needs of self-expression on the part of the children. By observing these festivals, we not only help to enhance their interest but also equip them with the necessary knowledge in respect of the why and wherefore of the celebrations. This is very essential these days because on account of the urban way of mechanical life, we are already being deprived of the sweet and abiding influence of nature and its beauties. Besides it is still more harmful that we are leading an indifferent and rather unsocial life divested of the closer humanities. This is of course, not a happy augury and hence it follows that we bring home the significance and cultural values to the children. Declaration of holidays on these festivals is no less than an impediment in the way of their celebration and enjoyment. It is suggested that celebrations should be taken on these days and let all the students and teachers participate in the celebration whole-heartedly. Such sprinkling of cultural celebrations will be a relief in the monotony of routine work.

As stated in the beginning these celebrations are very useful as a medium of education firstly because they offer the maximum scope for self expression by way of music, dramatics, drawing, painting, art, singing, Bhajans, Powadas, literary work like elocution, story telling, writing scripts participating in symposia, debates, essay-writing; organisation of exhibition, community dinner, excursion, preparation of albums, photography, sports, games and various sorts of competetions. Students have actually carried out these activities with tremendous success, and have met the challenge of the situation squarely. Organising capacity, cooperation, sincerity of purpose initiative, resourcefulness, imagination, artistic abilities in various fields, literary, histrionic and poetic talents came to the floor and have been a subject of appreciation as well as admiration. They feel that the enjoyment coupled with cultural values have brought some unknown treasure of bliss to them. In short, if we look to and understand the potentialities underlying these celebrations, we shall not only be amazed but should feel sorry if we miss to exploit them for the education and development of the educand.

Last but not the least, they change the outlook towards life, inculcate tolerance and respect for all that is "True, wholesome and beautiful.".

Curiously enough the principles underlying all religious preaching are almost identical namely peace, love, tolerance, fraternity, benevolence, social service, non-violence, abhorence of vices etc. The celebrations as envisaged above will go a long way in inculcating reverence for these principles and devotion to them besides removing unfounded prejudices against coreligionists. It will develop a secular attitude based on self-respect and help to imbue a spirit of national consciousness and consecrecation to great ideals of devotion and service to humanity at large.

बुनियादी शिक्षा और सामाजिक परिवेश

लक्ष्मीलाल के० ओड

बुनियादी शिक्षा में समवाय का एक प्रधान केन्द्र सामाजिक वातावरण भी है। इसका स्पष्ट आशय है कि शाला में दी जाने वाली शिक्षा स्थानीय समाज के जीवन से संयुक्त होगी, तथा उसके जीवन को स्पर्श करती हुई अग्रसर होगी। शाला तथा स्थानीय समाज की प्रवृत्तियां एक-दूसरे के जीवन को अनुप्राणित करेंगे।

बुनियादी शिक्षा के जन्मदाता महात्मा गांधी के सामने सामाजिक वातावरण द्वारा शिक्षा का नक्शा स्पष्ट था, जैसा कि उनके द्वारा किये गये शैक्षणिक प्रयोगों में लक्षित होता है। दक्षिणी अफ्रीका के फिनिक्स संस्थान एवं टाल्स्टाय आश्रम तथा भारतवर्ष में चम्पारन क्षेत्र और साबरमती आश्रम में उन्होंने शिक्षा का जो स्वरूप सामने रक्खा था, उसमें पाठशाला स्थानीय समाज की शिक्षा का भी एक केन्द्र थी।

शाला तथा समाज में जब पार्थक्य सा रहता है, तब शिक्षा निष्फल रहती है। हम विद्यार्थी को पाठशाला में सफाई से रहने का पाठ सिखाते हैं, परन्तु घर पर वह गन्दा ही रहता है। स्कूल में कताई बुनाई का काम होता है, परन्तु खादी के वस्त्र न विद्यार्थी ही पहनते हैं न उनके माता पिता ही। स्कूल में प्रजातन्त्रात्मक प्रणाली से सहयोग द्वारा अनेक कार्यों को करने की आदत डाली जाती है, परन्तु परिवार के ३ सदस्यों में ही सहयोग नहीं होता। शिक्षा की इस निष्फलता का मूल कारण घर और शाला के वातावरण में आकाश-पाताल का अन्तर है। हम सच्चे मानों में सामाजिक वातावरण से समवाय करके शिक्षा नहीं दे रहे हैं, अन्यथा इस प्रकार के परिणाम नहीं आ सकते।

आज बुनियादी शालाओं में सामाजिक वातावरण के नाम पर कुछ पर्व-त्यौहारों को मनाने की प्रथा है, और उससे सम्बन्धित ज्ञानात्मक विषयों का

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अध्ययन करवा देने से समवाय की रस्म अदायगी कर दी जाती है। कहीं-कहीं तो पर्व-त्यौहारों को मनाने की भी आवश्यकता नहीं समझी जाती; केवल उस प्रसंग का होना ही समवाय के लिए पर्याप्त माना जाता है। इसे हम सह-सम्बन्ध ही कहेंगे, समवाय नहीं। बुनियादी शिक्षा के परिपोषकों को पुनः अपने आपसे यह प्रश्न करना चाहिए कि क्या सामाजिक वातावरण से समवाय का यही वास्तविक आशय है ? तथा इसके द्वारा विषयों के परिपाक में परंपरागत प्रणाली से क्या विशेष बात है ? इस प्रकार विषयों के अध्यनन से क्या ज्ञान अधिक सुगम, स्वाभाविक तथा ग्राह्य बन जाता है ? जब तक बुनियादी शाला अपने आपको स्थानीय समाज से सम्बद्ध नहीं कर लेती तब तक सामाजिक वातावरण द्वारा समवाय केवल "रस्म अदायगी" मात्र ही रहेगी।

आज जिन गांवों में या स्थान विशेष में बुनियादी शालाएं स्थित हैं, उनके जीवन स्तर में, उनके रहन-सहन में, उनके विश्वासों में, उनके आचार-व्यवहार में—जीवन के किसी पक्ष में भी बुनियादी जीवन के किसी पक्ष को बुनियादी शालाओं ने स्पर्श किया है ? सामाजिक वातावरण से समवाय करने के लिए हमें शाला की वर्तमान धारणा में मूलतः परिवर्तन करना पड़ेगा बुनियादी पाठशाला केवल ५ घंटे चलने वाली शाला नहीं हो सकती। इसी प्रकार बुनियादी शाला केवल बच्चों की शिक्षा का केन्द्र ही नहीं अपितु सारे गांव की शैक्षिक प्रवृत्तियों का केन्द्र होनी चाहिए।

उपरोक्त विवेचन से मेरा यह आशय कदापि नहीं है कि शाला अपने स्वरूप को सर्वथा त्याग कर स्थानीय समाज में अपने आपको विलीन कर दे। शायद वह दिन अभी दूर है, जब ऐसा सम्भव हो सकेगा, परन्तु पाठशाला की ही कुछ प्रवृत्तियों का प्रसार स्थानीय जनता तक किया जा सकता है, जिससे विद्यार्थियों को शिक्षा के साथ ही समाज की भी कुछ शिक्षा हो सके, कुछ उनका भी कल्याण हो सके। इस प्रकार की कुछ प्रवृत्तियों का उल्लेख निम्न-लिखित पंक्तियों में किया जा रहा है।

उद्योग तथा सामाजिक वातावरण

प्रत्येक बुनियादी शाला में २-३ उद्योग चलते हैं। उद्योग के चुनाव में सदा ही इस बात का ध्यान रखना चाहिए कि वह उद्योग उस स्थान से सम्बद्ध हों। स्कूल में चलने वाला उद्योग आदर्श रूप में होना चाहिए। उसकी प्रक्रियाएं वैज्ञानिक होनी चाहिएं तथा आधुनिकतम साधनों के निर्देशन, प्रयोग आदि के लिए स्कूल की एक उद्योग प्रयोगशाला भी होनी चाहिए। स्कूल का उद्योग कार्य गांव वालों के लिए अनुकरणीय होना चाहिए।

समय समय पर शाला में या गांव में निर्देशन पाठ होने चाहिएं जिनके द्वारा गाँव के लोग भी लाभ उठा सकें। इस उद्योग के सम्बन्ध में गांव वालों को यदि किसी मार्ग दर्शन की आवश्यकता हो तो शाला के द्वार उसके लिए खुले होने चाहिएं। उस उद्योग से सम्बन्धित साधनों का भी गांव वालों को उपयोग करने का अवसर प्राप्त होना चाहिए। उदाहरण के लिए यदि किसी पाठशाला में कृषि मूलोद्योग हो तो पाठशाला का खेत इतना अच्छा होना चाहिए कि गांव के लोग उससे प्रेरणा प्राप्त कर सकें। स्कूल के खेत में जोतने, बोने, काटने तथा रक्षा करने की विभिन्न वैज्ञानिक विधियों के प्रयोग होने चाहिएं। उनके परिणामों को देखकर पाठशाला के छात्रों की शिक्षा तो होगी ही, साथ ही गांव वालों की शिक्षा भी होगी। आधुनिक वैज्ञानिक औजार तथा उनके उपयोग से उपज पर प्रभाव का निर्देशन, शाला में समय समय पर होने आवश्यक हैं। यदि आसपास के गांवों की केन्द्रीय पाठशाला हो तो उसमें अच्छे बीज वितरित करने, हल बैल उधार देने आदि की व्यवस्था भी शाला को करनी चाहिए। समय समय पर शाला की प्रदर्शनी, शिक्षक-संरक्षक सम्मेलन आदि माध्यमों के द्वारा भी गांव के उद्योग धंधों का विकास करने में शाला को सहयोग प्रदान करना चाहिए।

जिन शालाओं में उद्योग शिक्षक पृथक से रखने पड़ते हैं, वहां स्थानीय कारीगरों को वरीयता प्रदान करनी चाहिए। ये कारीगर विनम्र होते हैं तथा लोक जीवन के अधिक निकट होते हैं। यदि अध्यापक के स्थान पर उन्हें नियुक्त न किया जा सके तो भी कभी-कभी उन्हें उद्योग सम्बन्धी निर्देशन देने के लिए शाला में आमंत्रित किया जा सकता है।

शाला, पंचायत तथा उसकी नियोजित सेवाएं

बुनियादी शालाओं का संगठन लोकतन्त्रात्मक प्रणाली पर होता है। शाला संगठन सम्बन्धी अनेक प्रवृत्तियां छात्रों की पंचायत के अधीन होती हैं। उदाहरणार्थ खेल-कूद, आमोद-प्रमोद, पर्यटन, सांस्कृतिक आयोजन, क्लब, साहित्य-परिषद, शिविर आयोजन, पत्रिका संपादन, सहकारी दुकान, शाला का औषधालय आदि प्रवृत्तियां छात्रों द्वारा निर्वाचित पंचायत तथा उसकी विभिन्न समितियों द्वारा चलाई जाती हैं। सामाजिक वातावरण से समवाय की दृष्टि से इनका भी महत्वपूर्ण स्थान है। विद्या-भवन बुनियादी मदरसे में इस विभिन्न प्रवृत्तियों को "नियोजन सेवा" कहा जाता है। यह प्रश्न विचारणीय होगा कि समवाय तथा समाज संपर्क की दृष्टि से इन नियोजित सेवाओं का स्थानीय समाज तक प्रसार करना कहां तक वांछनीय होगा ?

इसके पूर्व कि हम इस प्रकार की प्रवृत्तियों के प्रसार का विचार करें,

हमारे लिये आवश्यक होगा कि प्रसार सम्बन्धी हमारे उद्देश्य के बारे में हम स्पष्ट हों।

प्रथम तो हमारे मन में यह स्पष्ट होना चाहिए कि हमारा मुख्य उद्देश्य बालकों की शिक्षा है, समाज सेवा उसका एक साधन है, जिसे साध्य से गौण रखना आवश्यक है। उदाहरण के लिए बच्चो के घरों में घी तैयार होता है; उनके माता पिता को शहर में बेचने के लिए जाना पड़ता है। पाठशाला का सहकारी दुकान उसे खरीदने व बेचने का उत्तरदायित्व ले सकती है, इससे बालक के माता पिता को थोड़ी सुविधा हो जायेगी, परन्तु हमारा लक्ष्य केवल सुविधा देना नहीं है, अपितु हमारा साध्य है बालक की शिक्षा। बच्चा घी को तोलकर लाता है, तोलकर देता है, हिसाब लगाता है, डायरी में नोंट रखता है, इस प्रकार उसकी ज्ञानात्मक शिक्षा होती है, परन्तु इससे भी ऊपर उसकी नैतिक शिक्षा होनी चाहिए। सदा पूरा तोलकर लाने की नैतिक आदत उसकी पड़नी चाहिए। उसके नैतिक बल का सहकारी दुकान पर ऐसा प्रभाव होना चाहिए, उसके द्वारा तोलकर लाये गये घी को पुनः तोलने की आवश्यकता न ही पड़े। उसमें प्रामाणिकता का ऐसा विकास होना चाहिए कि वह घी में मिलावट नहीं करेगा। इस प्रकार के नैतिक मूल्यों की स्थापना करने में यदि नियोजित सेवा का प्रसार समर्थ हो तभी करना चाहिए। सहकारी दुकान का यह नैतिक प्रभाव बालक के माता पिता पर भी ऐसा पड़ना चाहिए कि वे भी सौदा पूरा तोल कर देंगे, मिलावट नहीं करेंगे। इस प्रकार हम बालक की शिक्षा अधिक कार्यकारी तथा फलदायी बना सकेंगे।

इसी प्रकार यदि औषधालय की सेवा का प्रसार गांव तक किया जावे तो इसका विचार कर लेना आवश्यक होगा कि बच्चों की शिक्षा में इस प्रसार के द्वारा क्या सहायता मिलेगी। क्या बच्चे गांव में फैलने वाली बीमारी को पहचान सकते हैं, तथा उसके कारणों का विश्लेषण कर सकते हैं? क्या वे गांव में बीमारी रोकने के उपायों का घर में अवलम्बन करते हैं? औषधालय चलाने से तथा उसका प्रसार करने से उनका स्वयं का तथा उनके परिवार के स्वास्थ्य का सार किस सीमा तक सुधरा है? क्या वे आलेख रख सकते हैं? सारांश में क्या इस प्रसार द्वारा बालकों की शिक्षा हो रही है?

नियोजित सेवाओं के प्रसार का दूसरा उद्देश्य स्थानीय समाज की पाठशाला के कार्यों में रुचि दिलवाना भी है। क्या शाला की तरफ से जो कुछ उनकी सेवा की जा रही है, वह उन पर थोपी तो नहीं जा रही है? क्या वे इसके प्रति जागरूक हैं? क्या इन सेवाओं द्वारा उनकी स्वयं की भी शिक्षा होती है?

नियोजित सेवाओं के प्रसार में तीसरा प्रश्न व्यवस्था का है। क्या इस

प्रसार की सम्पूर्ण व्यवस्था छात्रों द्वारा हो सकती है ? क्या सेवाओं के प्रसार में जितना समय लगाया जा रहा है, उस अनुपात में उनकी शिक्षा भी हो रही है, अथवा नहीं ? क्या सेवाओं की व्यवस्था में इतना समय तो नहीं खर्च हो रहा है कि उसके कारण पाठशाला के अन्य विषयों के अध्ययन में बाधा पड़ रही है ? आदि प्रश्नों का विचार करना भी आवश्यक है। उदाहरणार्थ घी आदि के खरीदने-बेचने आदि की व्यवस्था करना शाला की सहकारी दुकानों के लिए संभव भी होगा और उपयोगी भी, परन्तु अनाज की गाड़ियों को खरीदना व बेचना अथवा किसी की २० एकड़ भूमि जुतवाना, ट्रैक्टर चलवाना आदि सेवाएं पाठशाला की व्यवस्था में संभव नहीं होगा। पाठशाला इस प्रकार की सेवाओं के केन्द्र खोलने में गांव वालों की सहायता कर सकती है, परन्तु स्वयं इस कार्य को हाथ में नहीं ले सकती।

ग्राम समस्याएं

कभी-कभी ग्राम समस्याओं का अध्ययन एक नियोजन के रूप में लि जा सकता है। सामाजिक वातावरण के समवाय का यह भी एक साधन बन सकता है। उदाहरण के किसी गांव में नाहरू (गिनी वर्म) की बीमारी बहुत फैलती है। अध्ययन के लिए सारा स्कूल या स्कूल की कोई एक कक्षा इस समस्या को नियोजन के रूप में लेकर अनेक विषयों का इस प्रकार अध्ययन कर सकती है :—

१. नाहरू क्या है ? इस बीमारी के क्या लक्षण हैं ?
२. गांव के कितने लोग इस रोग से पीड़ित हैं ?
३. नाहरू क्या होता है ?
४. गांव में पानी किन-किन कुओं से आता है ?
५. कितने कुएं बिना सीढ़ियों के हैं, और कितने सीढ़ी वाले ?
६. किन कुओं पर पीने का पानी भी भरा जाता है और लोग वहीं स्नान भी करते हैं ?
७. नाहरू से मुक्त होने के क्या उपाय हैं ? उनका तुलनात्मक अध्ययन। भविष्य में नाहरू रोग से कैसे बचा जाये ?

क्रियात्मक कार्य

१. गांव पंचायत से मिलकर सीढ़ी वाले कुएं बंद करवाना।
२. कुओं में दवाई डालना।
३. अस्पताल के अधिकारियों से मिलकर नाहरू के उपचार की व्यवस्था करवाना।

इस प्रकार के नियोजन के द्वारा ग्राम समाज तथा बच्चों दोनों की शिक्षा होगी।

तात्कालिक एवं सामाजिक समस्याएं

सामाजिक वातावरण से समवाय की दृष्टि से देश की सामयिक राजनैतिक एवं सामाजिक प्रवृत्तियों का महत्व भी कम नहीं है। उदाहरणार्थ जनगणना का कार्य, विभिन्न प्रकार का सर्वेक्षण कार्य, आदि प्रवृत्तियों में भी शाला का सहयोग अनिवार्य है। इन कार्यों के द्वारा एक ओर छात्रों की शिक्षा होती है तथा दूसरी ओर सामाजिक कार्यों को निभाने की प्रशिक्षा भी होती है।

समाज निर्माण सम्बन्धी प्रवृत्तियां

देश की भावी पीढ़ी में होने वाली गतिविधि तथा समाज निर्माण के कार्यों के प्रति जागरूक रखना भी आवश्यक है। सामुदायिक विकास योजना के अन्तर्गत गांवों में जो प्रवृत्तियां चल रही हैं उनके प्रति छात्रों का दृष्टिकोण बनाने के लिए उन्हें इन कार्यों में रुचि दिलवाना आवश्यक है। इसका सबसे अच्छा साधन किसी सामुदायिक विकास खंड में एक या दो सप्ताह का शैक्षणिक शिविर हो सकता है। इसी प्रकार के पंचवर्षीय योजना सम्बन्धी कार्य, अल्प बचत योजना आदि सभी समाज निर्माणकारी प्रवृत्तियां सामाजिक परिवेश के अन्तर्गत आती हैं। भूदान आन्दोलन इसी प्रकार की सामाजिक क्रांति का वाहन है। इस आन्दोलन के कार्य द्वारा छात्रों की जितनी भी शिक्षा हो सके उतना सहयोग इस कार्य में भी देना चाहिए।

ग्राम पंचायत का केन्द्र यदि पाठशासा ही बन सके तो उसके द्वारा भी छात्रों की शिक्षा के अनेक अवसर प्राप्त होते हैं।

पर्व और त्यौहार

सामाजिक वातावरण की दृष्टि से अन्तिम परन्तु अनन्यतम स्थान प्राकृतिक, सामाजिक, धार्मिक, सांस्कृतिक तथा राष्ट्रीय पर्व एवं त्यौहार तथा मेलों आदि का है। महापुरुषों की जयंतियां या स्मृति दिवस भी इसी के अन्तर्गत आते हैं। इन पर्व त्योहारों द्वारा यह सम्बन्ध मात्र ही होता है, सच्चे मानो में पर्व-त्योहारों के द्वारा समवाय करने के लिए इन त्योहारों को नियोजन (Project) के रूप में लेना चाहिए। तथा नियोजन से सम्बन्धित प्रवृत्तियों को माध्यम बनाकर ज्ञानात्मक एवं क्रियात्मक विषयों की शिक्षा होनी चाहिए। इस प्रकार के एक नियोजन की अत्यन्त संक्षिप्त रूपरेखा नीचे

दी जाती है, जो केवल संकेत मात्र है—

नियोजन : शाला का वार्षिकोत्सव मनाना—

कक्षा	क्रियात्मक प्रवृत्ति	ज्ञानात्मक विषयों की शिक्षा
१.	झंडियां बनवाना, चिपकवाना तथा लगवाना	कागज की कहानी, विभिन्न रंगों का ज्ञान गोंद सफाई कोणों का ज्ञान गिनती जोड़ आदि
२.	रंगमंच की सफाई तथा तैयारी।	सफाई का महत्व साज सज्जा
३.	लिफाफे बनवाना तथा निमंत्रणपत्र लिखवाना	पोस्ट आफिस की कहानी निमंत्रणपत्र लिखने की विधि
४.	रंगमंच बनवाना	लम्बाई, चौड़ाई, लम्बकोण, क्षेत्रफल, रंगमंच की आवश्यकता
५.	नाश्ता तैयार करना परोसना अतिथियों का स्वागत बैठाने की व्यवस्था।	संतुलित भोजन सामान्य शिष्टाचार वार्षिक रिपोर्ट तैयार करना

इसके अतिरिक्त सांस्कृतिक एवं मनोरंजन कार्यक्रम में प्रस्तुत करने के लिए कक्षा के अनुरूप संगीत, नृत्य, कविता, संवाद तथा नाटक आदि की तैयारी में सभी कक्षाओं के विद्यार्थी अन्य विषयों का अध्ययन भी करेंगे। कुछ पर्व त्योहारों का आयोजन स्कूल कर सकता है और उनमें स्थानीय जन-समुदाय के पर्व त्योहारों में स्कूल सम्मिलित हो सकता है, दोनों ही प्रकार से शाला-समाज-संपर्क भी साधित होता है और बच्चों की शिक्षा भी होती है।

स्थानीय लोक जीवन में प्रचलित मनोरंजन-कलाओं को शाला संशोधित तथा सुसंस्कृत रूप प्रदान करके प्रस्तुत कर सकती है; उदाहरणार्थ रामलीला, नौटंकी, पुतलियों का खेल, नाच, तुर्रा-कलंकी, यात्रा आदि, अनेक लोकानुरंजक अभिनय कलाएं या तो काल कवलित हो रही हैं, या उनका रूप विकृत हो रहा है : इन्हें पुनर्जीवित करने के लिये तथा लोक कलाकारों की शिक्षा की दृष्टि से इन्हें परिशोधित किया जा सकता है। इन लोकाभिनय माध्यमों के द्वारा नवीन सामग्री परोसी जा सकती है। देश व समाज में जो द्रुत परिवर्तन हो रहे हैं, उनका ज्ञान इन साधनों के द्वारा प्रदान किया जा सकता है, इसी प्रकार देश निर्माण के कार्यों का परिचय तथा विज्ञापन भी इन

माध्यमों के द्वारा हो सकता है ।

लोक गीत तथा लोक काव्यों में साहित्य की अपूर्व सामग्री छिपी पड़ी है । मानव मन की भावनाओं की जितनी सहज अभिव्यक्ति इन लोक गीतों में हो सकती है उतनी कदाचित साहित्यिक रचना में न हो, क्योंकि साहित्यिक रचना पर कृत्रिम सभ्यता की छाप रहती है; भाषा को लालित्य प्रदान करने के लिए आग्रह करना है, परन्तु लोक गीतों में सीधी सादी भाषा में मन की निसर्ग सिद्ध अभिव्यक्ति रहती है। इनका संचयन, अध्ययन तथा प्रयोग भी आवश्यक है ।

अनेक पर्व त्योहारों का रूप विकृत हो गया है, उन्हें सही ढंग से मनाना सिखाना, एक ओर यदि बच्चों की शिक्षा है तो दूसरी ओर समाज की शिक्षा भी है ।

इस प्रकार हमने देखा कि सामाजिक वातावरण से समवाय करने में निष्क्रिय रूप से ही विषयों का अध्ययन नहीं होता अपितु उद्योग केन्द्रित अध्ययन के समान ही सामाजिक वातावरण केन्द्रित अध्ययन उतना ही सक्रिय होता है ।

बुनियादी शिक्षा में नियोजन : एक प्रयोग

दीनदयाल दशोत्तर

बुनियादी शिक्षा में समवाय के केन्द्र के रूप में सामाजिक वातावरण को मान्यता प्राप्त है। वर्ष भर में आनेवाले पर्वों में मकर संक्रान्ति एक विशेष महत्व रखता है। इसका भौगोलिक महत्व भी स्पष्ट है।

इस अवसर पर विद्याभवन बुनियादी मदरसे में एक शैक्षिक नियोजन के आधार पर लगभग आठ दिन का उद्योग व अध्ययन का कार्यक्रम रखा जाता है।

स्थानीय परम्परा के अनुसार विद्याभवन परिवार के लोगों के लिए इस पर्व का आयोजन बुनियादी मदरसे के जिम्मे रहता है। विद्याभवन की केन्द्रीय संस्थाओं से लगभग दो मील की दूरी पर ग्राम-क्षेत्र में बसे हुए बुनियादी मदरसे में परिवार के सभी सदस्य एकत्रित होकर आनन्द मनाते हैं।

उस दिन कार्यक्रम लगभग तीन घण्टे तक चलता है जिसमें देशी खेल तथा सांस्कृतिक कार्यक्रम के अतिरिक्त गन्ने का रस वितरण किया जाता है।

इस दिन के कार्यक्रम को लक्ष्य बनाकर अध्ययन नियोजन कार्यान्वित किया जाता है।

नियोजन के सैद्धान्तिक पक्ष के निभाव का पूरा ध्यान रखा जाता है। इस सम्बन्ध में कुछ स्पष्टीकरण करना आवश्यक है। यद्यपि नियोजन के चारों पदों का समावेश होता है यथा (१) संचयन, (२) योजना, (३) क्रियान्विति, (४) सिंहावलोकन, तथापि प्रथम पद—संचयन—में जो उसका स्थान प्रोजेक्ट प्रणाली के प्रणेताओं की कल्पना के अनुसार होना चाहिये वह नहीं होता। बुनियादी शिक्षा के नियोजन व अमेरिकी प्रोजक्ट में मूलभूत अन्तर होना अवश्यम्भावी है। प्रोजेक्ट पद्धति का लक्ष्य जबकि बालक में सृजनात्मक प्रवृत्ति का विकास करना है तो बुनियादी शिक्षा का उद्देश्य उपयोगिता तथा सामाजिक मूल्यों की प्राप्ति प्रथम है। प्रोजेक्ट पद्धति के अनुसार प्रोजेक्ट या नियोजन बालक द्वारा चुना जाता है तथा काल्पनिक वातावरण को शाला में

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सजीव बनाकर ज्ञानोपार्जन की परिस्थिति उत्पन्न की जाती है। बुनियादी शिक्षा के नियोजन की भिन्नता तथा विशेषता यह है कि यह वातावरण की सजीवता तथा जीवन की परिस्थितियों की वास्तविकता के कारण बालक के मन से उतना ही गुथा हुआ होता है जितना कि स्वयं प्रेरित नियोजन। बाकी तीन पदों की उपलब्धि के बारे में कोई मतभेद नहीं।

नियोजन का मूलभूत सिद्धान्त है कि ज्ञान प्राप्ति निष्क्रिय रूप से नहीं होकर वास्तविक कार्यों के सम्पादन द्वारा होती है। नैसर्गिक वातावरण में बालक सरलतापूर्वक ज्ञान प्राप्त कर लेता है।

ऊपर बताया जा चुका है कि संक्रान्ति उत्सव के कार्यक्रम को लक्ष्य बनाकर यह नियोजन चलाया जाता है। यह सिद्धान्त पूर्वमान्य होता ही है कि कार्यक्रम के योजना निर्माण तथा संचालन में छात्रों तथा छात्र नेताओं के पहल का पूर्ण स्थान रहता है। अध्यापकों के लिए यह निश्चय करना आवश्यक हो जाता है कि शैक्षिक दृष्टि से किस कक्षा को जल से किस भाग की तैयारी का जिम्मा उठाना उपयुक्त होगा तथा उद्योग एवं प्रवृत्ति को आधार बनाकर पाठ्यक्रम का कौन सा भाग चरितार्थ किया जा सकता है। उद्योग कार्य की योजना बालक की तत्सम्बन्धी पृष्ठभूमि तथा पाठ्यक्रम को ध्यान में रखकर बनाई जाती है।

नियोजन के सम्पादित करने में अध्यापकों का क्या भाग है यह भी स्पष्ट करना आवश्यक है। जहाँ एक ओर छात्रों के पहल, मौलिकता, रचनावृत्ति इत्यादि को प्रमुखता प्राप्त है वहां साथ ही साथ यह भी आवश्यक है कि अध्यापक की अपनी पूरी तैयारी हो ताकि छात्र द्वारा उठाये गये प्रश्नों का समाधान करने में तथा नई समस्याओं को सुलझाने में सहायता देने को पूर्णरूपेण तैयार रहे, अतएव अध्यापक की कल्पना स्पष्ट होनी चाहिए कि क्या काम किया जाने वाला है तथा उसको करने की विधि क्या होगी। इस सम्बन्ध में अध्यापकों में विचारविनिमय तथा आदान-प्रदान भी आवश्यक हैं। नियोजन की शैक्षिक संभावनाओं पर विचार करने, अध्यापकों के मन में नियोजन के सम्बन्ध में असदिग्धता न रहे अतएव एक सामूहिक मनस का निर्माण करने, संभावित कठिनाइयों का निराकरण करने, पाठ्य सामग्री एवं अन्य साधन सामग्री जुटाने आदि कार्य की प्रगति आंकने, छात्रों पर होने वाले परिणामों का मूल्यांकन इत्यादि करने के लिए अध्यापकों की कई बैठकें होती हैं। ये उन बैठकों के सिवाय हैं जो वे अलग-अलग कक्षाओं में छात्रों के साथ करते हैं। प्रत्येक कक्षा में चार-पाँच बैठकें हो जाती हैं। इन सबके फलस्वरूप उस वातावरण का निर्माण होता है जोकि नियोजन का प्राण है।

कक्षा विशेष को कार्यक्रम का अमुक भाग सौंपना भी सकारण होता है।

कक्षा ५ को रस वितरण का जिम्मा इसलिए दिया जाता है कि कक्षा शाला में सदा ही नाश्ता वितरण का काम करती है। कक्षा ८ के हिस्से सारे कार्यक्रम की व्यवस्था इसलिए आती है कि इस कक्षा के सभी छात्र विद्यार्थी पंचायत (छात्र-सभा कार्यकारिणी) के सदस्य हैं।

सारा कार्यक्रम एक विशाल पैमाने पर होता है। लगभग ८०० आदमियों के बैठने का प्रबन्ध, सात संस्थाओं के सांस्कृतिक कार्यक्रम का आयोजन, लगभग ५०० (स्त्री, पुरुष, बालक) के एक साथ एक समय खेलने का प्रबन्ध तथा ८०० आदमियों के रस पान का प्रबन्ध इत्यादि। प्रबन्ध करने में लगभग ५० छात्र तथा १० अध्यापक होते हैं। कार्यक्रम के विभाजन की रूपरेखा तथा ज्ञानात्मक विषयों के अध्ययन की योजना अगले पृष्ठ पर दी गई सारिणी से स्पष्ट हो जायगी।

इस प्रकार नियोजन का कार्य पिछले दो वर्षों से चल रहा है। सौभाग्य से इस समय टीचर्स कालेज के छात्राध्यापकों के अभ्यास पाठ चलने से, उनका सहयोग प्राप्त होने से कार्य बड़ी सफलता से चलता है। परीक्षावस्था में होने से प्रयोग में त्रुटियां रहना अवश्यम्भावी है।

नियोजन पद्धति के प्रति एक आलोचना है कि उसके कारण पाठ्यक्रम का तारतम्य टूट जाता है। यह नियोजन की इस दृष्टि से अपवाद नहीं है। परन्तु इसके कारण बालकों के व्यक्तित्व के विकास में जो सहायता प्राप्त होती है वह पाठ्यक्रम के तारतम्य से अधिक मूल्यवान है। बालकों को सामाजिक वातावरण में जीवन की वास्तविक परिस्थितियों से जूझने का अवसर प्रस्तुत होता है। उनमें जो सहकार, व आपसी आदान-प्रदान होता है उसका जीवन पर प्रभाव स्थायी होता है। ऐसे अवसरों पर की गई ज्ञान प्राप्ति चिर स्थायी होती है। सृजनात्मक आनन्द का अनुभव जो बालक करते हैं वह हम केवल उनके प्रफुल्लित बदनों से ही आंक सकते हैं।

योजना की सारिणी

कक्षा	संक्रान्ति कार्यक्रम की योजना में भाग	पृष्ठभूमि में तैयारी रूप में किया गया कार्य तथा पूरक प्रवृत्तियां	ज्ञानात्मक अध्ययन
८	सारे कार्यक्रम की योजना बनाना तथा उसका संचालन	—खेल के मैदानों को रेखांकित करना —खेल का सामान तथा कपड़े की गेंद बनाना —कविता पाठ तथा संगीत की तैयारी	—लकड़ी के काम से सम्बन्धित उद्योग धंधे —वन-सम्पदा; लकड़ी की सुरक्षा —रेखा के समद्वि भाग —कविता-संकलन
७	खेलों का प्रबन्ध	—खेल कार्यक्रम की योजना बनाकर भिन्न-भिन्न कक्षाओं को भिन्न-भिन्न काम सौंपना —गुल्ली डंडे तथा सतोलिया के गट्टे बनायें —कविता पाठ —पोस्टर बनाना (सूचना के)	—वन-संपदा —वन रक्षा के उपाय —गन्ने के भोजन तत्व —गुड़ व शक्कर का आहार विहार पर प्रभाव —वृत, अर्द्धवृत —पृथ्वी की गतियां
६	सांस्कृतिक कार्यक्रम का संचालन	—खेल के मैदानों को रेखांकित करना —निमन्त्रण पत्र लिखना, विभिन्न संस्थाओं से आइटम्स मंगवाना —गन्ने छीलना —तिलकूटा बनाना —कविता पाठ तथा संगीत	—तिल व गन्ने के आहार तत्व —गन्ने के रोग —पत्र लेखन —कविता-संकलन

५	रस वितरण	—गन्ने काटना व छीलना। उन्हें पेरने का प्रबन्ध करना —मटके, शकोरे इत्यादि मंगवाना, उन्हें धोना, रस छानना —जलसे के आइटम्स की तैयारी —कबड्डी का मैदान तैयार करना	—पृथ्वी की गति —पत्र लेखन —सूचना पत्र लिखना
४	स्टेज व प्रेक्षागृह की तैयारी तथा सजावट	—खुले स्टेज की लिपाई, पुताई तथा चित्रांकन —स्टेज की फूल पत्ती द्वारा सजावट —गमले रंगना तथा सजाना	—सजावट के सिद्धान्त —लेबलिंग —चित्रकारी
३	सड़कों की सफाई व सजावट	—गमले सजाना, बन्दनवार बनाना, तोरण द्वार बनाना	—चित्रकारी —गमलों की रंगाई
२	सफाई, सजावट तथा पीने के पानी का प्रबन्ध	—झंडियें बनाना—खेल के मैदान के निशान के लिए	—त्रिभुज, चतुर्भुज, वृत —रंगों की पहचान

PART III

SAMPLES OF CORRELATED PLANS

LESSON PLANNING IN BASIC SCHOOLS

D.V. CHICKERMANE

In ordinary schools a subject-centred syllabus is followed and as such lesson planning is not a difficult problem. Topics from the syllabus of the subjects can be taken one after the other in serial order. If pupils have to study a reader, the lessons will be taught one after the other in the order given in the book. If it is Arithmetic, topics will follow the order in the syllabus, as numeration, notation, addition, subtraction and so on. But a Basic school follows an activity centred syllabus. Pupils do activities one after another in the order fixed in the activity programme of work and knowledge is given as and when a need is felt for the same in the performance of activities. Knowledge is not classified subject-wise. Lesson planning in Basic schools will have to follow a different pattern than in ordinary schools.

In Basic schools work is of three types. Firstly, there will be activities. These will be from the three centres—crafts, physical environment and social environment. Certain targets in these three fields will be fixed and activities will be carried on by pupils to reach these targets. The second type of work will be imparting knowledge. This will be imparted as and when the need for it is felt in the performance of activities. The activities are to be done well. If so, some knowledge will be necessary. If we want a good yield on our farm, we must know something of the different types of manures and their utility. The third type of work will be fixing and systematising the knowledge gained through activities. The knowledge gained through activities is likely to be scrappy and incomplete. It is to be fixed and classified in different branches

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From B.T., I (I) Jan. 1958

of knowledge, known as subjects. Gaps, if any, have to be filled in.

Corresponding to these three types of work, there will be broadly three types of lessons in a Basic school. Firstly there will be activity lessons. These will be meant for different types of activities to attain the prescribed targets. The second type of lessons will be knowledge lessons correlated with activities. Being based upon activities, these lessons will not be subject-wise. An activity may give scope to a variety of subject lessons at the same time, as an Arithmetic lesson, a Geography lesson, a History lesson, etc. The activity together with the khowledge lessons generated by it will form a homogeneous group of lessons. The whole group will form one unit of correlated teaching. The third type of lessons will be supplementary lessons intended to fix up the knowledge gained through activities. These lessons will be related directly to the knowledge gained through activities and thus indirectly to the activities.

The activity lessons and the correlated knowledge lessons will form units of correlated teaching. Each unit will consist of one activity and some knowledge lessons generated by the activity. The number of correlated knowledge lessons for an activity is not fixed. It depends upon the activity. Some activities may not generate knowledge lessons, while others may have one, or two or three lessons. The correlation between the activity and knowledge should be natural; artificial or forced correlation is not correlation. Such knowledge can be given through supplementary lessons. The supplementary lessons will be subject-wise, as History, Geography, Arithmetic, Language etc. They will be mainly concerned with drill, fixation, filling gaps, systematisation, teaching of grammar etc.

The syllabus in any school subject will have to be analysed into units of correlated teaching as described above. It will, first, be necessary to make a list of activities to be organised in a class. There will be the craft activities as per requirements of the syllabus. The crafts selected may be spinning and weaving, gardening and agriculture, or cardboard work and woodwork. Then, there will be activities relating to social and physical environments. These will consist of daily routine, including safai, prayers, assembly, celebrations of national days, cultural programmes, self-government in schools, school excursions, village work and similar other programmes. No fixed quota is laid down for this kind of work. These activities will vary with classes and facilities available for their organisation. Once the activities to be organised in a class are listed, then selection of items of knowledge to be correlated from the subject syllabus with these activities becomes an easy thing. The subject syllabi will thus be distributed into units of correlated teaching. This analysis of the subject syllabi into units of correlated teaching round an activity-centred syllabus is an important part of lesson planning in Basic schools.

The weekly time table of work in Basic schools also will have to follow this three fold division of lessons. In the time table of an ordinary school, there will be knowledge lessons based on the subject syllabus. They will be classified as subject-wise and will include imparting of new knowledge as well as fixing the same. Thus periods will be allotted to History, Geography, Science etc. In the timetable of a Basic school, provision will have to be made for the three types of lessons as indicated above. There will be activity lessons, meant for activities wherein certain prescribed targets are to be attained. There will be provision for correlated knowledge lessons having no subject-wise division. These lessons will include Language, Arithmetic, History etc. based upon activities. Then there will be the supplementary lessons, for fixing and systematising knowledge gained through activities. These lessons will be on a subject wise basis—as History, Language, Geography etc. The total number of periods of work in a week will have to be distributed over these three types of lessons, depending upon the activities to be organised and subject syllabi to be covered in a class.

ONE YEAR OF WORK

S. RAJAM

The Government Post-graduate Basic Training College, Orthanad, is situated in one of the quietest rural spots in Tamil Nad. It is an ideal situation for an institution of this kind. The College campus is surrounded by green paddy fields stretching for miles all round, and is skirted on one side by a subchannel of the Mettur Canal which provides water for irrigation and other needs for nearly nine months of the year. The immediate accommodation requirements of the College, are temporarily met by some of the buildings of the local Government Basic Training school. Additional structures are being added. Steps have been taken for putting up permanent buildings suitable for the College.

The College has just finished one year of intensive work. Twenty one students took the training, and have appeared for the University Degree Examinations in April 1958.

Basic education is education for life through life. The College is therefore organised as a fully residential community, and the students are expected to run the daily life of their community largely by their own self-effort. They have to participate individually and collectively in organising their own health and sanitary needs, their own kitchen, store-room and dining hall services, their productive and practical work, group and individual study as well as cultural and recreational activities. The theoretical study of Educational Psychology and Sociology, Methodology, Administration, etc., are based largely on their daily life and practical work. Lectures, discussions and supervised study complete the comprehensive knowledge and understanding required for their professional competence.

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It was a tough job that awaited the young men as they started to organise their community life. Having tasted the amenities of city life, during their college education, they were not quite prepared, physically and mentally, to face the demands of this rural set up. But they accepted the challenge of the situation, They girded up their loins for hard manual labour. There was no hired labour allowed here. They had themselves to clean up their places and the college campus, remove the cobwebs, arrange the class room, and tidy up the pathways. They had to dig their own waste pits and above all they had to provide for themselves their own sanitary arrangements. They planned all the details, the time and the place, the men and materials needed to construct a six seater trench latrine 18′×3′×2′ with six chambers protected by 'thatties'. It was a co-operative effort, well executed. A good and useful job well done gave them real joy. When they used this compost latrine and maintained it by turns, day after day, they realised the meaning of self-effort in regard to one of our most important daily needs and also the way of new social order without exploitation of man by man could come into being. They had dispensed with the 'scavenger' altogether and had taken upon themselves the work assigned to him.

As soon as this latrine was used up they shifted the latrine to another spot and they had to do this four times during the year. This was not only a matter of sanitary provision. This was also substantial "productive" work. They had prepared nearly 400 cubic feet of good compost manure for the College farm, which will be available for the next agricultural season. By proper disposal of waste material, it was possible thus to produce wealth.

After the work was executed the students set down to assess its educational value for themselves, and for children of all grades, at school. There was a symposium on the educational possibilities inherent in the organisation of the work unit. They discovered for themselves the skills acquired, the habits and attitudes cultivated, and the knowledge that was gained. The members on the staff fully participated in the development of every stage of this work programme. They discussed with the students the educational outcomes of their organised work.

Next to sanitation and health, the student community was faced with the need of a kitchen for themselves. They now embarked on the project of constructing a temporary kitchen with brick and mortar, contributing all the manual labour involved. They got the village mason to be their resource person. They apprenticed themselves to him as it were and went through all the details, planning the foundations, preparing the mortar, laying the bricks, applying the plaster and building the roof. They were so happy when the work was finished. It gave them a self-confidence they had not felt before. From the start they organised it as an educational activity going through all the stages of planning, preparation, execution, finishing, recording, assessing and the correlated knowledge as well as habits and attitudes arising out of it all. They looked upon their own construction with legitimate pride and pleasure. Here again they went through experience of self-sufficiency in regard to shelter.

Production of food was the next significant area of human need. Each trainee had his own plot of vegetable gardening. But they all had a common plot of ten cents which they straightaway proceeded to convert into a paddy field. They dug out the soil, levelled it up, got it ploughed and prepared the field. They planted the seedlings and in another five months reaped the harvest. They could produce with the limited resources at their command, nearly 2 bags of paddy and this was more than twice the average production in that locality. The rice they so got was purchased by the student community and consumed by themselves. Thus these trainees had the experience of producing a part of their food requirements, and of consuming what they produced.

The third major project of the year was the production of cloth. The students started spinning right from the start, beginning from raw-cotton; they went through all the processes of cleaning, ginning, carding, slivering, spinning and used their own yarn for weaving. At the end of the year they produced nearly 60 yards of cloth from double twisted yarn. Each one of them had for his share 2½ yards of cloth produced by his own self-effort and so in regard to cloth they got an insight into the possibilities of self-sufficiency.

They organised their own community life on a self-governing basis. They elected every month their cabinet, their own food committee and their auditors. The Speaker of the College Assembly was elected by them. They planned a number of cultural activities, including celebration of festivals, excursions, devotional gatherings, flag hoisting, etc.

The teaching practice programme was the most important project of all : They did four weeks of teaching practice in Senior Basic Schools of Orathanad and Tanjore and one week of intensive teaching practice in the Post-Basic Schools at Gandhigram and Kallupatti. It was during this phase of their training that the students realised the full significance of all the organised work units they had themselves been going through. They discovered that they had unconsciously imbibed the characteristic methodology of Basic education i.e., of education through productive work. It was indeed an instance of learning by doing i.e., understanding the methodology by following the same methodology through planned activities even at the training level. They also discovered the varied possibilities of correlated instruction not only through productive work, but also through the situations relating to the natural and social environments of children as contemplated in the Basic Education scheme. In addition to their own community living, their sharing of the daily toil, mutual service, and co-operative experiences of leadership and responsibilities, the college community developed a living contact with two social groups outside their own institution. They provided midday meals for twenty needy children of the model Senior Basic Schools from their own kitchen and served these children food by turns, throughout the year. They maintained also systematic cumulative records each for one child. They organised play hours and play festivals for these children. The other outside group was the village folk of Kokkarai 25 miles away. They visited this village once a fortnight and organised Sanitation Service, Village Survey, Milk Supply to school children and Film Shows. The experiences provided by the above programmes, undoubtedly, made a rich contribution to their professional training.

It was in the background of such productive work and social consciousness as well as of self-reliant, co-operative and democratic community living that lectures on Health and Sanitation, History of Education, Principles of Basic Education, Educational Psychology and Sociology, General and Special methods of Teaching and Learning, Theory of Activities and School Administration and Physical, Cultural and Recreational activities, were organised. The students were also guided to study these topics from selected books in the College Library, which has a very good collection of standard books on Education, Psychology and Sociology including Basic Education. When the students finished their course of training they had developed a lively appreciation of the fact that Basic Education contains within itself many of the features of modern progressive educational thought and practice, and that its own characteristic and original contribution, namely of education through productive work is in consonance with the up-to-date findings of Educational Psychology and Sociology.

WEEK'S TEACHING IN BASIC TRAINING COLLEGES

C. D. INDAPURKAR

In the Bombay Province, in all the Basic training colleges, primary as well as secondary, week's teaching generally in a rural primary school is made compulsory for pupils under training. To me this is certainly a significant contribution of Basic education to the practice of teaching in this country.

One reason is that it has tried to remove one of the greatest defects of the old type training colleges. In these training colleges attempt is never made to give the pupil-teachers full scope to tackle the various school problems other than that of teaching. Their contact with the schools is strictly limited to giving thirty practice lessons only. Naturally these pupils under training get a very haphazard knowledge of the school system and working, even though they have to spend their whole future life in that particular field.

In Basic training colleges as the pupil-teachers have to live in a rural area and to conduct the school for one complete week, the above mentioned defect is naturally removed. Besides actual teaching, pupil-teachers learn so many things directly and indirectly.

In the first place the pupil-teacher comes to know what different types of registers and records he is expected to keep regularly. He has to study the whole syllabus and make a definite plan of his week's teaching including curricular and extra-curricular activities. He understands the responsibility of the Headmaster, as one day in a week he has to occupy that post. He thus gets a chance to face the problem of maintaining smooth relations between the Head and his assistants.

From B.T., II (3) July 1959

Along with this, he has to tackle several other school problems like maintaining discipline among pupils, use of punishments—corporal and non-corporal, framing a time-table to the greatest possible satisfaction of the maximum number of teachers, distribution of home-work and its checking and so on.

Another valuable contribution of the week's teaching is found in its working as a community in miniature. The pupil-teachers are just enjoying a camp life for a week and hence they have to live in a co-operative spirit in order that their regular life in village should be as smooth as possible. We find this spirit at its highest level here because without it they cannot conduct their mess, make arrangement of their baths etc. or get help from the villagers.

As they are living in an unknown village with the whole school under their command, they have to make every effort to get the co-operation of parents for its happy working. The cultural and social programmes of the school would never be successful without it. They have to take the parents into confidence and tell them about the school difficulties as well as the new trends of thought in Indian education so that they should not have any prejudices against Basic education. They have to tackle these problems and then they are really in a position to grasp the difficulties in maintaining smooth teacher-parent relation and to overcome difficulties in the routine of work.

This week's teaching gives pupil-teachers an indirect training of behaving in a community which, to my mind, is most important. They get a natural training of loving their neighbours and winning their confidence. While we were in a village near Gargoti for our week's teaching, our students won such a confidence of the persons next door that they used to come daily to consult them when their children were sick of typhoid, they also used to give them courage and the best possible help. Incidents of this kind can easily be multiplied if brought together.

It would not be wrong if I make a few suggestions to make a worthier use of this week's teaching. In the first place I think, if proper pre-planning is made it is possible to undertake the uplift work of some particular villages, turn by turn. Instead of a week's teaching a fortnight would be more profitably included in the curriculum and pupil-teachers might be asked to live one week in each term of the year. They can start new activities in the school and in the village and see from time to time how they take root.

The week's teaching can be more profitably used in reducing the burden of practice lessons of the pupil-teachers. When they get a good idea of the technique of teaching, they can conveniently be asked to finish the required number of lessons even without all of them being observed by the master of method.

This week's teaching is certainly a boon towards improvement of primary schools in the villages, as a batch of enthusiastic pupils-teachers with a well-educated master of method turn up to them. Particularly the pupils of the Graduate Basic training centre and Senior Basic training colleges, have something of their own which is very useful not only to the pupils of the village primary school but also to the teachers in those schools. If a closer and constant contact is kept between those teachers and these pupil teachers, these village schools would be greatly benefited.

Thus I think it is the duty of the protagonists of Basic education to see that this week teaching in Training colleges is more fruitfully used.

NECESSITY OF FOLLOWING A PRESCRIBED SYLLABUS OF ACTIVITIES AND CORRELATED KNOWLEDGE IN BASIC SCHOOLS

B. V. RAMANIAH

A Basic School teacher has to use his talents in establishing a close and causal relationship between the chosen activity and the correlated knowledge of prescribed subjects so that the knowledge may be gained by the children in a natural way.

In order to ensure the best results, it is essential that the teachers should select suitable activities corresponding to child's physical and mental conditions. He should also clearly know what knowledge can be given naturally through these activities.

Only a body of experts having a thorough knowledge and practical experience of Basic education can work out the list of suitable activities and correlated knowledge for each grade taking into consideration educational and economical and other problems. If all this work of finding out suitable activities and the related knowledge is left to teacher, he will not be able to do it. He will not have enough ability and time to do it. The system of correlated teaching needs more preparation on the part of the teacher. Therefore the task of the teacher will be greatly facilitated if he is provided with a ready-made guiding list of activities and the graded knowledge content to be covered by each class. The teacher may have the freedom to select the suitable topic. But it is very necessary that the teacher should be informed what he should do in the class during the year both by way of activity and correlated knowledge in different subjects.

Though it is not possible to give a list of all the activities that are expected to be done, it would be enough to list 80% of

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From B.T., III (3) July 1960

them in the syllabus, the rest can be left to the teacher to be planned as and when occasion demands. By doing so, the freedom of the teacher is not hampered in any way as there is much scope for him to use his intelligence and initiative in planning the organisation of activities and correlated teaching.

The critics of Basic education system say that children of Basic schools are poor in academic knowledge. If a syllabus of activity and correlated knowledge is followed, it will also answer these critics.

The chart given below shows how some portions of knowledge prescribed by "the Syllabus for Basic schools" published by the Ministry of Education, Government of India can be conveniently correlated to the activities prescribed for different classes in gardening and agriculture.

By following this method it is not only possible for the teacher to choose correct activities easily but also effect natural correlation with the subjects expected to be taught. If the syllabus is not prescribed, there is a danger of not chosing the suitable activities and also of not imparting the expected standards of knowledge of different subjects.

So, it is very necessary that the teachers should follow a prescribed syllabus which gives details of activities and correlated knowledge meant for different standards.

Plan of lessons taken from 'Syllabus for Basic schools' published by Ministry of Education, Govt. of India

(Reference to Pages of the book are given under each subject)

Grade	Activity 18	Correlated Knowledge				
		Mother Tongue 77	Social Studies 79	Mathematics 92	General Science 94	Art (Drawing) 96
I	Visits to local Markets	To speak clearly and fluently chaste language with distinct and correct pronunciation regarding important vegetables grown locally and imported from outside.	Stories about the locality in which the school is situated.	Counting the varieties of vegetables grown and imported.	Kinds of plants vegetables from (a) Leaves Ex. green (b) Roots Ex. Radish (c) Fruits Ex. Brinjal (d) Bulbs Ex. Onion	Arrangement of things in an orderly way
II	Sowing seeds in pots. Sowing in rows	To write simple sentences about the work done.	How village obtains food.	Tables of measures in relation to seeds sown	Growth of the seeds. Conditions of growth	To draw the sketch of growing seeds.
III	Transplanting Seedlings	To describe the activity in detail.	Study of the district in relation to the crops grown in different places of District	Tables of Money taking the cost of preparing seedlings	Day and night How they are caused taking the time of work and rest.	Sketch of roots and their parts
IV	Propagating plants by other methods than seeds. Use of bulbs—Sowing onion bulbs.	To read a bulletin regarding the method of cultivation of onion crop.	Visiting a farm to study onion crop grown there.	Addition of compound quantities Seer, Viss & Maund the relation to the weight of onion bulbs used.	Kinds of stems—underground stems onion, garlic etc.	Onion, showing leaf bud in the middle.

शाला में समवायी अध्यापन का आयोजन

दीन दयाल दशोतर

बुनियादी शिक्षा में समवाय को सर्वोपरि स्थान प्राप्त है। यह बुनियादी शिक्षा का प्राण है। यदि इस प्रणाली में से समवाय को निकाल दिया जाय तो यह केवल उद्योग शिक्षा रह जायगी। समवाय को शिक्षा में प्रमुख स्थान देने की पृष्ठ भूमि में मुख्य दो सैद्धान्तिक धारणाएं हैं। एक तो बालक का जीवन सम्पूर्ण इकाई है, जीवन अलग अलग विभागों में बंटा हुआ नहीं है, अतएव बालक को प्राप्त होने वाला ज्ञान और उसके शाला में प्राप्त होने वाले अनुभव बंटे हुए नहीं होने चाहियें। वे एक दूसरे से संबंधित तथा संगठित होने चाहियें। इस संगठन का आधार है बालक का संपूर्ण जीवन न कि उसका कोई एक पक्ष। दूसरे शिक्षा का उद्देश्य है बालक के जीवन का सर्वांगीण विकास, तथा साधन है पाठयक्रम। पाठ्यक्रम का संयोजन इस प्रकार होना चाहिये कि वह बालक के जीवन से सम्बन्धित हो। सौभाग्य से हमारे समक्ष बुनियादी शिक्षा के इस प्रकार के पाठ्यक्रम प्रस्तुत हैं, यद्यपि उनमें परिवर्तन व परिवर्द्धन की आवश्यकता रहती है।

इन आधारों को स्वीकार कर जब बालक के विकास की ओर अग्रसर होते हैं तो कुछ आवश्यकताएं दृष्टिगोचर होती है कि जिनके अभाव में उपलब्धियाँ अपूर्ण या विकृत रह जाती हैं।

सबसे प्रथम आवश्यकता है अध्यापकों में समुचित योग्यता की। यदि उच्च शैक्षिक योग्यता के अध्यापक मिल सकें तो अत्युत्तम, परन्तु सर्व विदित है कि सामान्य शालाओं में इस दृष्टि से अध्यापकों की समस्या बनी ही रहती है। परन्तु कुछ तैयारी से अध्यापकों में उचित परिवर्तन लाया जा सकता है। वह यह है कि वे सूझ बूझ से काम ले सकें तथा विनिमय तथा चिन्तन से समस्याओं का विवेचन करने एवं उन्हें सुलझाने को तत्पर हों तथा परीक्षण के लिये तैयार रहें।

बाल मनोविज्ञान के कुछ मान्य सिद्धान्त सभी के सामने स्पष्ट होने चाहियें।

यथा, बालक संवेदनशील व्यक्ति है जिसका कि भावना पक्ष प्रबल है साथ ही बालक को सक्रिय होने में आनन्द अनुभव होता है। कक्षा गत पुस्तकीय अध्ययन बालक के लिये आनन्ददायक नहीं है। बालक निष्क्रिय रह कर सुनना समझना पसन्द नहीं करता। पाठ्यक्रम को कार्यान्वित करते समय यह ध्यान रखा जाना आवश्यक है कि यह पाठ्यक्रम प्रवृत्ति मूलक है तथा इसके आधार पर संचालित प्रवृत्तियों को तथा तत्संबंधी ज्ञान का गत्यात्मक होना आवश्यक है। प्रवृत्तियों की शैक्षिक सम्भावनाओं का पूर्ण उपयोग होना आवश्यक है।

समवाय के तीन केन्द्र अपनी-अपनी समस्या उपस्थित करते रहते हैं। किस विषय का किस केन्द्र से समवाय करें कौन-सा शीर्षक किस प्रवृत्ति या अवसर से अनुबन्धित किया जाय यह समस्या सदा सामने बनी रहती है। शाला में उद्योग समय-क्रम की एक दैनिक प्रवृत्ति है, अतएव समवाय के लिये उसका प्रयोग तो हो जाता है परन्तु सामाजिक वातावरण का उपयोग यदा कदा ही होता है इसी भांति प्राकृतिक वातावरण भी अपेक्षाकृत कम ही उपयोग में लाया जाता है। एक समस्या यह भी है कि कुछ विषय या पाठ्य वस्तु को घुमा फिरा कर बार-बार पढ़ा दिया जाता है। फल यह होता है कि बालक का विकास अवरुद्ध होता जाता है वह समझता है कि ज्ञान स्थिर है उस की सीमा होती है। प्रवृत्ति प्रारम्भ होते ही वे कह उठते हैं कि क्या पाठ पढ़ाया जाने वाला है। नवीनता के अभाव में बालक की अरुचि होना स्वाभाविक है।

उदाहरण के तौर पर, वृक्षरोपण की प्रवृत्ति के साथ वन महोत्सव तथा वनों के लाभ यह पाठ कक्षा ३ से कक्षा ८ तक हर कहीं कई बार पढ़ा दिया जाता हैं याने बालक को अपने शाला जीवन में इसी पाठ को ४ अथवा ५ बार पढ़ना पड़ता है। विचारणीय बिन्दु यह है कि क्या यह समय का अपव्यय नहीं है तथा क्या यह बालक में अपव्य के प्रति अरुचि उत्पन्न नहीं कर देगा? यह पाठ बालक के शाला जीवन में अधिक से अधिक दो बार पढ़ाया जाना ठीक जंचता है, पहली बार तो कक्षा ४ या ५ में जहां बालक अपने क्षेत्र का या देश का भूगोल पढ़ता है तथा दूसरी बार ऊंची कक्षा में जब वह काष्ठ कला में अपने हाथ से लकड़ी की वस्तुओं का निर्माण करता है तथा लकड़ी की पहिचान तथा उसके उपयोग के जीवित पाठ पढ़ता है।

प्राकृतिक वातावरण से बहुत कम समवाय किया जाता है जब कि यह सर्वविदित है कि छोटे-छोटे बालकों की शिक्षा का आधार साधारण शिक्षा में भी वातावरण को बनाया जाता है।

अतएव आवश्यक है कि सारी शाला के पाठ्यक्रम के आधार पर एक सुनिश्चित योजना बना ली जाय जिस में नीचे मुद्दे आधार रूप में हों :—

(१) किस कक्षा में किस बिन्दु से किस शीर्षक का अनुबन्ध होगा।

(२) जब वही पाठय वस्तु विभिन्न कक्षाओं में पढ़ाई जावे तो स्पष्ट होना चाहिये कि वहा इसका पढ़ाना क्यों आवश्यक है व किस प्रकार आगे की कक्षा में पढ़ाई जाने वाली वस्तु नीचे की कक्षा से अलग है ।

(३) भिन्न-भिन्न कक्षाओं की वार्षिक क्रम का उचित विश्लेषण हो कि कौन-सा शीर्षक कब सम्पादित किया जायगा तथा वही बिन्दु किस प्रकार अलग-अलग कक्षाओं में पढ़ाये जाते हुए भी गतिशीलता बनाये रख सकता है ।

उपरोक्त बिन्दुओं को ध्यान में रख विद्या-भवन बुनियादी मदरसे में जो क्रिया की गई वह अन्त में दी हुई टेबल के अनुसार है :—

प्रत्येक माह की रूपरेखा में सकेत रूप में लिख लिया गया कि प्रत्येक माह में कौन-सी उद्योग सम्बन्धी प्रवृत्तियां लें, क्या प्राकृतिक वातावरण रहेगा, तथा कौन-सी सामाजिक व सांस्कृतिक प्रवृत्तियां होंगी । फ़िर सारे वर्ष के पाठ्यक्रम को देखा कि किस अंश का किस प्रवृत्ति से ठीक समवाय होगा, तथा इन्हें लिख लिया गया । इस सारी योजना के कुछ अंश लेख में दिये गये हैं । यहां केवल कक्षा ४ व ७ की तथा अक्तूबर नवम्बर की रूपरेखा उद्धृत की गई है ।

कार्य यहीं समाप्त नहीं होता है । कई प्रवृत्तियां या अवसर ऐसे होते हैं जिनका या तो एक से अधिक कक्षा में समवाय के रूप में प्रयोग होता है या सारे मदरसे में उसका प्रयोग होता है । प्रथम श्रेणी में तुलसी जयन्ती, यू० एन० ओ० दिवस, तिलक जयन्ती इत्यादि हैं । द्वितीय श्रेणी में आते हैं, संक्रांति समारोह, गांधी जयन्ती । इनके लिये सारी शाला में कुछ न कुछ काम हो सकता है । अतएव आवश्यक है कि इन प्रत्येक अवसर को लेकर एक सविस्तृत योजना बना ली जा सकती है कि जिसमें स्पष्ट लिख लिया जाय कि किस प्रवृत्ति से किस विन्दु का समवाय किया जायगा तथा वह कितने पाठों में सम्पादित होगा । इसमें ध्यान यह रखा जाना चाहिये कि न तो कोई अवसर या प्रवृत्ति आवश्यकता से अधिक समय लेकर दूसरे काम को ठेस पहुंचावे तथा न यह ही हो कि उस अवसर की शैक्षिक सम्भावनाओं का पूर्ण उपयोग ही न हो सके । अतएव यह भी आवश्यक है कि योजना बनाने के बाद उसको पूर्ण जागरूकता तथा सतर्कता से सम्पादन किया जाय तथा बाद में सिहावलोकन कर देखा जाय कि जिस उद्देश्य को लेकर काम प्रारम्भ किया गया है वह पूर्ण हुआ है या नहीं ।

इस ओर भी प्रयास चल रहे हैं तथा कुछ उपलब्धियां हुई हैं । इस प्रकार के नियोजन के दो नमूने 'बुनियादी तालीम' पत्रिका के अप्रैल १९५९ तथा जुलाई, १९५९ के अंक में प्रकाशित हुए हैं ।

समवाय की इस योजना को कार्यान्वित करने में कोई विशेष कठिनाई नहीं होती। शाला वर्ष में २४० दिन चलती है, जिसमें से लगभग ३० दिन परीक्षाओं तथा इस प्रकार के विशेष कार्यों में देकर भी २१० दिन का समय जो मिलता है वह पाठ्यक्रम को पूरा करने के लिये पर्याप्त है। यह अवश्य है कि शाला का परीक्षात्मक व प्रयोगात्मक दृष्टिकोण होने से यदा कदा साधारण सा व्यवधान आ जाता है। आशा है कालान्तर में यह भी नहीं रहेगा।

समवाय के सम्बन्ध की एक दो कठिनाइयाँ अवश्य हैं :

पहली, इतिहास के पाठ्यक्रम को पूरा करने के बारे में। साधारण तौर पर इतिहास घटनाक्रम के अनुसार पढ़ाना बालक की दृष्टि से सुविधाजनक है। अतएव इसका समवाय भी सीमित मात्रा में ही सामाजिक एवं सांस्कृतिक अवसरों से हो सकता है। इतिहास के काफी भाग को बिना समवाय के पढ़ाया जाता है, यद्यपि इस बात का ध्यान अवश्य रखा जाता है कि इतिहास के केवल वे ही पक्ष बच्चे के सामने रखे जायें जो कि समाज के वर्तमान को समझने में सहायक हों।

दूसरी, प्रारम्भिक कक्षाओं के अध्यापन की। कक्षा १ में जहां अक्षर ज्ञान दिया जाता है, वहां रुचि पक्ष का आधार बना कर तथा खेल प्रवृत्ति को प्रयोग करके अवश्य अध्यापन किया जाता है परन्तु समवायी पद्धति की सीमाएं ही दृष्टिगोचर हुई हैं। इसी भांति प्रारम्भिक गणित भी मूर्त के आधार पर तो पढ़ाया जाता है परन्तु अन्य किसी प्रकार के समवाय की सीमाएं ही दिखाई देती हैं।

तीसरी, जैसे-जैसे ऊंची कक्षाओं की ओर अग्रसर हुआ जाता है वैसे-वैसे साधारण समवाय कम होता जाता है तथा मनोवैज्ञानिक के स्थान पर तर्क पद्धति का उपयोग होने लगता है। अध्यापन बालक के जीवन से समन्वित तो होता है परन्तु प्रवृत्ति के साथ वैसा निकट सम्बन्ध नहीं रहता कि जैसा नीचे की कक्षाओं में रहता है।

नियोजन-आधारित बुनियादी पाठ

लक्ष्मीलाल के० ओड

बुनियादी शाला में समवायी अध्ययन के सम्बन्ध में एक महत्वपूर्ण प्रश्न यह उठता है कि समवाय का यह स्वरूप जिसमें बहुधा प्रतीकात्मक रूप से अथवा येन-केन प्रकारेण क्रियात्मक प्रवृत्ति से ज्ञानात्मक विषयों को जोड़ दिया जाता है, शिक्षा की दृष्टि से उपादेय है ? इस प्रकार के समवाय से, जो समवायी प्रणाली का विशेष प्रयोजन होता है वह कहां तक फलित होता है ? इस प्रश्न की ओर ध्यान आकर्षित किया जा चुका है।*

प्रस्तुत लेख में एक प्रयोग का उल्लेख किया जा रहा है, जिसमें समवायी प्रणाली का एक भिन्न रूप दिखाई देगा।

पृष्ठभूमि

विद्याभवन टीचर्स कॉलेज, उदयपुर में बुनियादी पाठों के अभ्यास निमित्त सभी छात्राध्यापक एक निश्चित अवधि के लिए विभिन्न बुनियादी शालाओं में जाते हैं। प्रत्येक अध्यापक के पास एक पूरी कक्षा उस निश्चित अवधि तक रहती है, तथा वह कक्षाध्यापक के रूप में पूरा उत्तरदायित्व ग्रहण कर लेता है। यदि बुनियादी शाला प्रशिक्षण विद्यालय से दूर हुई तो सभी छात्राध्यापक अभ्यास पाठ की पूरी अवधि में पाठशाला स्थल पर ही रहते हैं तथा सामुदायिक जीवनयापन करते हैं, जिसके अन्तर्गत सामूहिक सफाई, सामूहिक प्रार्थना, सामूहिक भोजन, समाज सेवा, मनोरंजनात्मक कार्यक्रम आदि सभी का समावेश हो जाता है। प्रत्येक छात्राध्यापक सर्वतोभावेन अभ्यास शाला के प्रधानाध्यापक के अधीनस्थ माना जाता है। यद्यपि मार्गदर्शन के लिए प्रशिक्षण विद्यालय का एक प्राध्यापक भी उनके साथ रहता है, तथा सामुदायिक जीवन में भाग लेता है।

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*श्रीमाली, पन्नालाल. एक प्रशिक्षण विद्यालय में बुनियादी शिक्षा का व्यावहारिक स्वरूप. **बुनियादी तालीम,** १९६०, ३, १२-२४।

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प्रत्येक छात्राध्यापक दो सप्ताह के लिए छात्रों की सहायता से किसी एक नियोजन (प्रोजेक्ट) का चुनाव करता है। जो नियोजन चुना जाये वह उस पाठशाला की वास्तविक आवश्यकता से सम्बन्धित होना चाहिए। नियोजन के चुनने में कक्षा-अध्यापक, प्रधानाध्यापक, छात्राध्यापक तथा कक्षा के सभी छात्र मिल कर विचार विमर्श करते हैं तथा अन्त में किसी एक निर्णय पर पहुँचते हैं।

यहां जिन नियोजन का विवरण दिया जा रहा है वे प्राय: सभी मूलोद्योग से सम्बन्धित हैं। भिन्न अवसरों पर सामाजिक अथवा प्राकृतिक वातावरण से सम्बन्धित नियोजन भी चुने जाते हैं, जिनमें सारी पाठशाला भाग लेती है अथवा पृथक पृथक कक्षाएं भी इस प्रकार के कुछ नियोजनों का उल्लेख बुनियादी तालीम के पिछले अंकों में किया गया है।*

यहां जिन नियोजनों का उल्लेख किया जा रहा है उन सभी में निम्नलिखित सोपान सामान्य रूप से दृष्टिगोचर होंगे :

१. नियोजन का चुनाव
२. समस्या का विश्लेषण
३. योजना तैयार करना
४. योजना को क्रियान्वित करना
५. सिंहावलोकन।

कुछ नियोजन

कक्षा ८ ने छात्रावास के रसोईघर की दीवार बनाने का कार्य हाथ में लिया। इस समय तक रसोई घर तीन ओर से खुला हुआ था तथा ऊपर टीन की छत पड़ी हुई थी। वर्षा ऋतु में पानी की बौछारें आती थी तथा भोजन आदि के बनाने में कठिनाई उपस्थित होती थी, कक्षा ने यह निश्चय किया कि १० कार्य दिवसों में एक तरफ की दीवार ८×२×८ फीट की तैयार की जाये। दस दिन का कार्यक्रम इस प्रकार है :

दिनांक	क्रियाशीलन	क्रियाशीलन से अर्जित ज्ञान
२-२-१९६०	१. योजना बनाना	भाषा : योजना को लिपिबद्ध करना
	२. नाप लेना	गणित : क्षेत्रफल तथा घनफल के प्रश्न

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*दशोतर, दीनदयाल. बुनियादी शिक्षा में नियोजन : एक प्रयोग. **बुनियादी तालीम,** १९५८, १, १३२-१३४।

दशोतर, दीनदयाल. गांधी जयन्ती केन्द्रित अध्ययन-क्रम. **बुनियादी तालीम,** १९५९, २, ७६-७८।

	३. आवश्यक सामान तथा औजारों की सूची बनाना	
३, ४ तथा ५ फरवरी, १९६०	ईंटें बनाना	गणित : घनफल के प्रश्नों का अभ्यास भाषा : श्रम की महत्ता विज्ञान : मिट्टी के प्रकार व उनकी पहिचान
६ व ७ फरवरी, १९६०	नींव खोदना	भूगोल : भूमि का बढ़ना तथा सिकुड़ना गणित : घनफल के प्रश्नों का अभ्यास— काम और समय के प्रश्न विज्ञान : नींव खोदने के संबंध की आवश्यक बातें। गुरुत्वाकर्षण का सिद्धान्त
९, १० व ११ फरवरी, १९६०	ईंटों की चुनाई	भूमिति : लम्ब, आयतन, सावल आदि का प्रयोग गणित : घनफल के प्रश्नों का अभ्यास, काम और गति के प्रश्न विज्ञान : ईंटों की चुनाई में प्रयुक्त वैज्ञानिक सिद्धान्त समाज शास्त्र : गृहनिर्माण कला का विकास भाषा : चुनाई के साधन
१२-२-६०	चूने का प्लास्टर करना	गणित : अनुपात, समानुपात विज्ञान : चूने के तत्व, चूना रोड़ी आदि की मिलावट
१३-२-६०	कार्य का सिंहावलोकन	

कक्षा ७ में चर्चा के बीच यह पता चला कि स्कूल की बहुत बड़ी आवश्यकता पेशाबघर की थी। अभी तक स्कूल में अस्थाई कच्चे पेशाबघर बने हुए थे। इस कक्षा के छात्रों ने निश्चय किया कि स्कूल के लिए एक पक्के मूत्रालय का निर्माण किया जाये। कार्य तथा अर्जित ज्ञान की योजना इस प्रकार है :

दिनांक	क्रियाशीलन	अर्जित ज्ञान
२९-१-६०	मूत्रालय निर्माण योजना	समाज शास्त्र : मूत्रालय की सामाजिक आवश्यकता।

		भाषा : योजना स्वीकृति के लिए प्राधानाध्यापक को पत्र चित्रकला : शाला की पृष्ठभूमि में किस स्थान पर मूत्रालय बनेगा उसका मान चित्र
३०-१-६०	नाप करना व नींवें खोदना	गणित : क्षेत्रफल, जमीन पर लम्ब डालना, समानान्तर रेखा व घनफल का ज्ञान
२-२-६०	नींव भरना	भाषा : पत्थर—गद्यपाठ सामान्य विज्ञान : घुलनशील, अघुलनशील, रंध्रमय, रंध्रहीन पत्थर, नींव के पत्थर समाजशास्त्र : चट्टानों के प्रकार, बनाने की विधि गणित : घनफल, क्षेत्रफल, कार्य का नाप
३-२-६०	मूत्रालय का पाया भरना	सामान्य विज्ञान : चूने के तत्व समाज शास्त्र : चूने का उपयोग व उद्योग हिन्दी : चूना—रचना पाठ गणित : घनफल, कार्य का नाप
४-२-६०	दीवार की चुनाई	सामान्य विज्ञान : सीमेंट की रचना एवं तत्व समाज शास्त्र : सीमेंट का उपयोग, सीमेंट कार्य व कारखाने हिन्दी : दीवार स्वयं बोल उठी—आत्मकथा गणित : घनफल का अभ्यास
५-२-६०	दीवार चुनना	सामान्य विज्ञान : बुनाई के साधन, उनकी वैज्ञानिकता समाज शास्त्र : इन साधनों का उपयोग, इनका सुधार, उपयोगकर्त्ता

		हिन्दी : बुनाई के साधनों का वर्णन—मौखिक रचना गणित : घनफल का अभ्यास, समानांतर रेखाएँ, कोण, लम्ब, कार्य का नाप
६-२-६०	पलस्तर करना	सामान्य विज्ञान : पलस्तर क्यों व कैसे ? समाज शास्त्र : भारत में पलस्तर कला का विकास हिन्दी : भवन-लेप गणित : घनफल, कार्य का नाप
८-२-६०	पलस्तर करना	सामान्य विज्ञान : पलस्तर का मसाला, रेत, सीमेंट व पानी भूगोल : रेत की प्राप्ति, भूमि का कटाव हिन्दी : बालू—गद्यपाठ गणित : कार्य का नाप, घनफल का अभ्यास
९-२-६०	पूरे दिन पलस्तर का काम होगा	
११-२-६०	सिंहावलोकन	सामान्य विज्ञान : स्वास्थ्य की दृष्टि से योजना से कैसे मेल खाता है गणित : संपूर्ण खर्च का हिसाब समाज शास्त्र : ग्रामीण वातावरण, व्यय आदि की दृष्टि से क्या इस प्रकार का पेशाब घर उपयोगी है ? हिन्दी : सम्पूर्ण कार्य की रिपोर्ट लिखना
१२-२-६०	मूत्रालय निर्माण संबंधी अर्जित ज्ञान की परीक्षा	

कक्षा ६ के सामने यह समस्या थी कि स्कूल के सभी कमरों में खूँटियों का अभाव है। लोहे की कीलें चूने की दीवार में मजबूत नहीं रहती थीं और लम्बाई में बाहर कम निकली रहती थीं। चर्खे आदि टांगने के लिये खूँटियों की आवश्यकता प्रतीत होती ही थी, अतः इस कक्षा के छात्रों ने स्कूल के सभी

कमरों के लिये लकड़ी की खूंटियां बनाने की योजना बनाई। संक्षिप्त योजना इस प्रकार है :

दिनांक	क्रियाशीलन	अर्जित ज्ञान
२९-१-६०	योजना बनाना	भाषा : आवश्यक सामान की सूची बनाना गणित : आवश्यक लकड़ी का घनफल ज्ञान करना अनुमानित आय व्यय पत्रक बनाना चित्रकारी : खूंटियों का चित्र बनाना
२-२-६०	खूंटियां बनाने के काम आने वाले औजारों को तेज करना, धार बढ़ाना	सामान्य विज्ञान : एमरी पहिया, पत्थर का पहिया, सिल्ली आदि द्वारा औजारों को तेज करना व तिकोनी रेतियों से आरियों के दांते बनाना व औजारों की जानकारी देना। औजारों की रक्षा करने की विधि गणित : ३०° कोण, सीधी व वक्र रेखा का ज्ञान चित्रकारी : एमरी पहिये का चित्र बनाना
३-२-६०	आरी द्वारा चीरकर खूंटियां लगाने की पट्टियां तैयार करना	सामान्य विज्ञान : आरी के दान्तों की बनावट की विशेषता का कारण गणित : काटी हुई पट्टियों का घनफल समकोण व समानान्तर रेखाओं का ज्ञान चित्रकारी : आरी का चित्र बनाना
४-२-६०	पट्टियों पर रन्दा फेरकर साफ करना	गणित : सतह की समानता का ज्ञान चित्रकारी : रन्दे का चित्र बनाना
५-२-६०	भ्रमण व निरीक्षण—	काष्ठ कला के विशिष्ट औजारों व यंत्रों

	पोलीटेक्निकल स्कूल, व हेंडीक्रेफ्ट्स इंस्टीट्यूट का निरीक्षण	की जानकारी
६-२-६०	खूंटियों के लिये चीरकर लकड़ी निकालना व रेती से गोलाई देना	सामाजिक ज्ञान : विभिन्न प्रकार की रेतियों का विवेचन करना व उनका प्रयोग बताना गणित : खूंटियों का घनायतन निकालना चित्रकारी : रेतियों का चित्र बनाना
८-२-६०	खूंटियों व पट्टियों को रेतमाल से साफ करना	सामान्य विज्ञान : विभिन्न प्रकार की लकड़ियों का परिचय व प्रयोग, विभिन्न प्रकार के रेतमाल
१०-२-६०	पट्टियों के धरातल की जांच करना	सामान्य विज्ञान : धरातल जांचने के यंत्रों का वैज्ञानिक परिचय भाषा : विभिन्न प्रकार के वृक्षों की जानकारी—निबंधपाठ
११-२-६०	पट्टियों में छेदकर खूंटियां लगाना, व पीली मिट्टी से उन्हें पोतना	समाज शास्त्र : सागौन का काष्ठकला में महत्व भाषा : सागौन का महत्व—श्रुतिलेख
१२-२-६०	वार्निश तैयार करना व वार्निश करना	विज्ञान : मोम पॉलिश, तथा स्प्रिट पॉलिश, पदार्थों की घुलनशीलता गणित : पॉलिश में विभिन्न पदार्थों का अनुपात भाषा : खूंटी की आत्मकथा—गद्यपाठ
१३-२-६०	सिंहावलोकन	भाषा : किये गये कार्य की रिपोर्ट लिखना गणित : खूंटियां बनाने के कुल व्यय का हिसाब लगाना

		सामान्य : किस प्रकार खर्च कम पड़ सकता था इस प्रकार विचार विमर्श

कक्षा ५ के छात्रों ने कृषि कार्य में ही रुचि प्रदर्शित की। सब्जी बोने का समय था। विचार विमर्श के पश्चात् यही निश्चय हुआ कि कक्षा अपने खेत में भिंडी के बीज बोयेगी, और यदि समय से पूर्व समाप्त हो गया तो कुछ सब्जियों की पौध भी तैयार कर लिये जायेंगे। कार्य योजना इस प्रकार है :

दिनांक	क्रियाशीलन	अर्जित ज्ञान
२९-१-६०	योजना बनाना	हिन्दी : नियोजन की स्वीकृति के लिए प्रधान-अध्यापक को प्रार्थना पत्र लिखना। आवश्यक सामान की सूची तैयार करना। समाज शास्त्र : काम का विभाजन गणित : अनुमानित व्यय का लेखा तैयार करना—क्षेत्रफल
३०-१-६०	क्यारियां तैयार करना	सामान्य विज्ञान : मिट्टी, अधोमिट्टी का ज्ञान हिन्दी : जुताई के लाभ, गहरी जुताई के लाभ, तथा बहुत अधिक गहरी जुताई से हानियां
२-२-६०	डोले बनाना	सामान्य विज्ञान : डोलों का महत्व, लाभ तथा उपयोगिता। समतल क्यारियों से डोलों की तुलना। गणित : क्षेत्रफल के प्रश्नों का अभ्यास हिन्दी : लुई पास्चर का गद्यपाठ
३-२-६०	भिंडी की बुवाई	सामान्य विज्ञान : भिंडी बोने की विधि का ज्ञान, बीज के भागों का वर्णन व उनके कार्यों का ज्ञान। गणित : समानान्तर रेखा, समकोण का

		ज्ञान, बीज खर्च का हिसाब रखना । हिन्दी : लुई पास्चर का गद्यपाठ चालू
४-२-६०	खाद देना	सामान्य विज्ञान : खाद का महत्व, खाद के तत्व, जो पौधे की वृद्धि में मदद देते हैं । हिन्दी : कम्पोस्ट खाद (हिन्दी गद्य) समाज शास्त्र : खाद के प्रकार
५-२-६०	सिंहावलोकन	सामान्य विज्ञान : निरीक्षण पत्र तैयार करना तथा उसका लेखा रखना हिन्दी : किये हुए कार्य की रिपोर्ट लिखना, काम योजना के अनुसार पूरा हुआ अथवा नहीं । क्या कमी रही, आदि विषयों पर विचार-विमर्श । गणित : बीज, खाद आदि पर हुए खर्च का हिसाब लगाना । किये हुए काम का पारिश्रमिक निकालना ।

कक्षा ४ के छात्राध्यापक के पास सामुदायिक सेवा के रूप में चल पुस्तकालय का कार्य था । चल पुस्तकालय की अनेक पुस्तकें फट गई थीं । उन पर जिल्द चढ़ा कर उन्हें सुरक्षित रखा जा सकता था । इस कक्षा के छात्रों ने भी उनमें से अनेक पुस्तकें पढ़ी थीं और पुस्तकों की हालत उन्हें मालूम थी । अध्यापक ने समस्या को छात्रों के सामने प्रस्तुत किया और छात्रों को नियोजन पसन्द आया । इस प्रकार इस कक्षा ने नियोजन के लिए जिल्दसाजी का काम लिया । कार्य योजना इस प्रकार है :

दिनांक	क्रियाशीलन	अर्जित ज्ञान
२९-१-६०	समस्या एवं कार्य-योजना	हिन्दी : आवश्यक सामान तथा काम में आने वाले औजारों की सूची बनाना गणित : अनुमानित खर्च का अन्दाज पत्र बनाना

		चित्रकला : किताबों का चित्र बनाना सामान्य विज्ञान : दीमक से होने वाली हानियां
२-२-६०	कागज का गत्ता काटना	हिन्दी : औजारों का परिचय चित्रकला : कैंची का चित्र गणित : गज, फीट, इंच का जोड़
४-२-६०	लेही व अबरी बनाना	हिन्दी : लेही बनाने की रीति, लेही पर गद्य पाठ सामान्य विज्ञान : लेही में प्रयुक्त वस्तुओं का ज्ञान तथा उनके गुण चित्रकला : अबरी पर चित्रकारी
५-२-६०	सिलाई करना-कागज व गत्ता चिपकाना	समाज शास्त्र : सिलाई की कहानी हिन्दी : संज्ञा का ज्ञान गणित : भिन्नों का ज्ञान, समानांतर व चतुर्भुज का ज्ञान
६-२-६०	जिल्द पूरी करना, प्रेस करना व सजाना	हिन्दी : हमारा चल पुस्तकालय—गद्यपाठ गणित : एक किताब की कीमत निकालना
८-२-६०	जिल्द बांधने का अभ्यास	हिन्दी : हमारा चल पुस्तकालय—गद्यपाठ चालू समाज शास्त्र : कागज की कहानी गणित : एकिक नियम का अभ्यास चित्रकला : जिल्द चढ़ी हुई पुस्तक का चित्र
९-२-६०	जिल्द बांधने का अभ्यास	हिन्दी : जिल्द साजी, निबन्ध पाठ सामान्य विज्ञान : रंगों का साधारण ज्ञान गणित : एकिक नियम का अभ्यास
१०-२-६०	जिल्द बांधने का अभ्यास व टोक तैयार करना	हिन्दी : पुस्तकरानी—एकांकी गणित : त्रिभुज व आयत

		सामान्य विज्ञान : पुस्तक की दीकम से रक्षा
१२-२-६०	सिंहावलोकन	सभी विषयों की परीक्षा से क्या सीखा ? चर्चा

कक्षा ३ ने वसन्त में खिलने वाले विदेशी फूलों की क्यारी लगाने का निश्चय किया। कक्षा की आयु के अनुरूप यही कार्य था। कार्य योजना इस प्रकार है :

दिनांक	क्रियाशीसन	अर्जित ज्ञान
३०-१-६०	नियोजन का चुनाव व काम की योजना बनाना	हिन्दी : मौखिक वार्तालाप का अभ्यास गणित : क्यारियों का नाप करना तथा निशान लगाना सामान्य विज्ञान : ऋतु का वनस्पति के जीवन पर प्रभाव

दिनांक	क्रियाशीलन	अर्जित ज्ञान
२-२-६०	खोदना, व क्यारियां तैयार करना	हिन्दी : भूमि की खुदाई गद्यपाठ समाज शास्त्र तथा सामान्य विज्ञान : मिट्टी के रूप गणित : गज, फीट, इंच का गुणा
२-२-६०	क्यारियां तैयार करना व खुदाई करना	हिन्दी : भूमि की खुदाई—गद्यपाठ चालू गणित : गज, फीट, इंच के गुणा का अभ्यास सामान्य विज्ञान : पदार्थ के रूप—ठोस, द्रव, गैस समाज शास्त्र : मिट्टी के रूप
४-२-६०	क्यारिया तैयार करना व खुदाई करना	हिन्दी : फूल की क्यारियां—गद्यपाठ समाज शास्त्र : खुदाई के साधन सामान्य विज्ञान : मिट्टी के प्रकार गणित : नाप के प्रश्न
५-२-६०	खाद मिलाना	हिन्दी : खाद की आवश्यकता—गद्यपाठ गणित : तोल, मन, सेर व छटांक का ज्ञान

		समाज शास्त्र : खाद के रूप सामान्य विज्ञान—कम्पोस्ट खाद बनाने की विधि
६-२-६०	फूल के पौधों का स्थानांतरीकरण करना तथा सिंचाई करना	हिन्दी : आओ फुलवारी लगायें—गद्य पाठ गणित : नाप व तोल के प्रश्नों का अभ्यास समाज शास्त्र : पौधों को लगाने की भिन्न देशों में भिन्न-भिन्न विधियां सामान्य विज्ञान : पौधों की रक्षा
८-२-६०	बेलें लगाना व सिंचाई करना	हिन्दी : वृक्ष, लता, व पौधे—गद्यपाठ गणित : नाप व तोल के प्रश्नों का अभ्यास सामान्य विज्ञान : लताओं का चुनाव, उपयोग व रक्षा
९-२-६०	पूर्व क्रियाशीलन को अधार बनाना	समाज शास्त्र : सिंचाई की विधियां हिन्दी : सिंचाई की विधियां—रचना-पाठ सामान्य विज्ञान : सिंचाई की आवश्यकता पौधों की जड़ों का ज्ञान
१०-२-६०	सिंहावलोकन	(१) विभिन्न विषयों में अर्जित ज्ञान की परीक्षा (२) किये गये परिश्रम का हिसाब लगाना (३) काम की रिपोर्ट लिखना (४) क्या सीखा ? इस विषय पर विचार करना

२ कक्षा के बच्चों की रुचि खेलों में होना स्वाभाविक ही है। उन्होंने अपने लिए मिट्टी के खिलौने बनाने का नियोजन चुना। योजना इस प्रकार है :

दिनांक	क्रियाशीलन	अर्जित ज्ञान
२९-१-६०	मिट्टी के खिलौने की	हिन्दी : मिट्टी पर गद्यपाठ

	योजना तैयार करना—कौन-कौन से खिलौने बनायें—क्या-क्या वस्तुएं चाहिएं—कौन-कौन से औजारों की आवश्यकता होगी	सामान्य विज्ञान : चिकनी व रेतीली मिट्टी सामाजिक ज्ञान : राजस्थान के भिन्न-भिन्न भागों की मिट्टियां
३०-१-६०	खिलौने बनाने के लिए मिट्टी तैयार करना	हिन्दी : मिट्टी का गद्यपाठ—चालू सामान्य विज्ञान : घुलनशील पदार्थ गणित : जोड़ व बाकी का अभ्यास
२-२-६०	मिट्टी की छोटी-छोटी गोलियां बनाना	गणित : जोड़ व बाकी का अभ्यास हिन्दी : मिट्टी पर दस वाक्य लिखना सामान्य विज्ञान : गोल, लम्बा तथा चौकोर का ज्ञान
३-२-६०	मिट्टी की गेंद बनाना	गणित : जोड़ व बाकी का अभ्यास चित्रकला : गेंद का चित्र
४-२-६० ६-२-६०	मिट्टी के नींबू, टमाटर तथा अन्य फल तैयार करना	सामान्य विज्ञान : सफाई, शरीर की सफाई, नाखूनों की सफाई, हाथ-पैरों की सफाई आदि चित्रकला : नींबू, टमाटर तथा विभिन्न फलों के चित्र बनाना भाषा : प्रत्येक फल खिलौने पर पांच वाक्य बोलना। खिलौने की कहानी आत्म कथा के रूप कहलवाना गणित : गुणा व भाग के सवाल
९-२-६०	विभिन्न प्रकार के रंगों का तैयार करना	सामान्य विज्ञान : रंगों की जानकारी गणित : गुणा व भाग के सवाल हिन्दी : विभिन्न रंगों पर वार्तालाप
१०-२-६०	खिलौनों पर रंग करना	गणित : गुणा और भाग के सवालों का अभ्यास सामान्य विज्ञान : रंग पहिचानने का अभ्यास

११-२-६० सिंहावलोकन गणित : खर्च का हिसाब लगाना
हिन्दी : काम कैसा हुआ ? इस विषय पर वार्ता

विवेचन

उपरोक्त नियोजनों का विश्लेषण करने से निम्नलिखित तथ्य हमारे सम्मुख आते हैं :

(१) सभी क्रियाशीलन किसी प्रयोजन विशेष से निबद्ध हैं। जो भी नियोजन चुना गया है, वह शाला समुदाय की आवश्यकता से संबंधित है। इस प्रकार बुनियादी शिक्षा के एक मूल सिद्धान्त—कार्य द्वारा स्वावलम्बन—एक सीमा तक फलित होता है। जो नियोजन पूरे हुए है उनसे कुछ भौतिक लक्ष्यों की सिद्धी भी हुई है, और पाठशाला की किसी निजी आवश्यकता की पूर्ति हुई है।

(२) प्रत्येक नियोजन में कक्षा के छात्र, कक्षाध्यापक, प्रधानाध्यापक तथा छात्राध्यापक सभी संलग्न रहते हैं। सहयोग द्वारा कार्य का एक बहुत अच्छा अभ्यास इन नियोजनों के द्वारा प्राप्त हो सकता है।

(३) जिस शैक्षणिक प्रवृत्ति में अध्यापक तथा छात्र मिल जुल कर काम करते हैं, जिसकी योजना में छात्र हिस्सा बटाते हैं वह प्रवृत्ति शैक्षणिक दृष्टि से अत्यन्त फ़लदायी होती है। शैक्षिक प्रक्रिया में एकतंत्रीय विधि की अपेक्षा प्रजातांत्रिक विधि अधिक फलदायी होती है। ऊपर वर्णित सभी नियोजनों में शाला समुदाय के अन्दर विभिन्न प्रकार की भूमिकायें (रोल) अदा करने वाले विभिन्न व्यक्ति एक साथ मिल कर नियोजना की योजना एवं क्रियान्विति में सक्रिय योगदान करते हैं। इससे एक ओर यदि प्रजातांत्रिक विधि का अभ्यास प्राप्त होता है तो दूसरी ओर शैक्षिक प्रक्रिया भी अधिक लाभदायी होती है।

(४) समवाय की दृष्टि से विषयों के अध्ययन में वास्तविकता अधिक आ पाती है तथा कृत्रिमता से लगभग मुक्ति प्राप्त हो जाती है। समवाय के संबंध में यह एक भ्रामक धारणा बन गई है कि प्रतिदिन कुछ न कुछ क्रियाशीलन होना ही चाहिये और उसी से सारा ज्ञान उद्भूत होना चाहिए। इससे एक विचित्र प्रकार की कृत्रिमता आ जाती है। वास्तविक जीवन में कुछ दिन शायद केवल शारीरिक काम ही काम करना पड़ता है तथा उस अनुभव के आधार पर विषय संबंधी ज्ञान बाद में प्राप्त किया जा सकता है। उदाहरणार्थ जब खेत में फसल तैयार हो तब दो सप्ताह शायद फसल काटने में ही लगाने पड़ें और उससे सम्बंधित गणित आदि का ज्ञान शायद बाद में देना पड़ें, जबकि श्रम कार्य चाहे कुछ भी न हो और केवल पढ़ाई ही पढ़ाई हो। प्रस्तुत नियोजनों

में सर्वत्र यही दृष्टिकोण सामने रक्खा गया है। कक्षा ७ के नियोजन में एक दिन पूरा पलस्तर करने में ही लगाया गया है। वास्तविक परिस्थितियों में भी सीमेंट का पलस्तर खंड खंड में नहीं किया जाता। वह पलस्तर खराब हो जाता है। अतएव एक दिन पूरा पलस्तर में लगाने के बाद दूसरे दिन उससे संबधित ज्ञान प्रदान किया गया।

(५) समवाय की उपरोक्त भ्रामक धारणा के फलस्वरूप बुनियादी शालाओं में पर्याप्त अभ्यास तथा आवृत्ति के लिये अवसर नहीं मिलता क्योंकि प्रतिदिन दिये जाने वाला ज्ञान का समवाय उसी दिन किये गये क्रियाशीलन से होना आवश्यक है। गणित के कुछ सिद्धान्तों के पूर्ण आकलन के लिये आवृत्ति की आवश्यकता अनिवार्य है। प्रस्तुत नियोजनों में इस प्रकार की आवृत्ति के लिये पर्याप्त अवसर प्राप्त हुआ है।

(६) बुनियादी शालाओं की प्रचलित समवाय विधियों में खंडित प्रवृत्तियां होने का रिवाज चल पड़ा है। मूल प्रवृत्तियां तिरोहित सी होती जा रही हैं। परिणाम यह होता है कि ज्ञान में क्रमबद्धता नहीं रह पाती। यदि प्रवृत्ति खंडित है तो उससे प्राप्त ज्ञान भी खंडित ही होगा। प्रस्तुत नियोजनों में खंडित प्रवृत्तियां न लेकर एक क्रमवद्ध प्रवृत्ति ली गई है।

(७) बुनियादी शालाओं में अध्यापन का जो स्वरूप दिखाई देता है उसमें या तो क्रियाशीलन तथा ज्ञानात्मक विषय पृथक-पृथक पढ़ा दिये जाते हैं, जिनका एक दूसरे से कोई संबंध नहीं होता अथवा क्रियाशीलन तथा विषय ज्ञान के बीच प्रस्तावना एक पुल का काम करती है, जिसके सहारे अध्यापक प्रवृत्ति से विषय तक आ जाता है, और फिर एक दूसरे का कोई संबंध नहीं रहता। प्रस्तुत नियोजनों में इस प्रकार का प्रतीकात्मक सह संबंध नहीं जोड़ा गया है। क्रियाशीलन तथा ज्ञानात्मक विषय दोनों एक दूसरे से अभिन्न रूप से संबद्ध है। क्रियाशीलन ज्ञानात्मक विषय सिखाने के लिये केवल साधन के रूप में ही नहीं आती अपितु स्वयं भी साध्य होती है। क्रियाशीलन तथा ज्ञानात्मक विषय एक दूसरे को अच्छा बनाने में सहायक होते हैं।

(८) विद्यार्थियों की रुचि की दृष्टि से भी प्रस्तुत नियोजन अधिक लाभदायी सिद्ध हुए हैं। बालक एक ही प्रवृत्ति को करते करते ऊब जाता है। यह एक मनोवैज्ञानिक तथ्य है कि यदि कार्य का परिणाम प्रत्यक्ष न दिखाई देता हो, और कोई प्रक्रिया यंत्रवत चलती हो तो थकान शीघ्र आती है, तथा सीखने की प्रगति कम होती है। बुनियादी शालाओं में जहां प्रारम्भ से ही सभी कक्षाओं में प्रतिदिन केवल कताई ही कताई की प्रवृत्ति चलती है, वहां इस प्रकार की नीरसता आ जाती है, क्योंकि बच्चे नहीं जानते कि इसका कपड़ा कब तैयार होगा। परन्तु प्रस्तुत नियोजनों में परिणाम दस दिन के

पश्चात प्रत्यक्ष नजर आने लगता है। उसका सिंहावलोकन करना अपने आप में एक बहुत ही सम्पन्न अनुभव है, तथा एक अच्छी शिक्षा है।

(६) प्रस्तुत नियोजन में यद्यपि तात्कालिक प्रवृत्ति ही ज्ञानात्मक विषयों को सिखाने के लिये आधार बनी है तथापि जहां आवश्यक लगा है वहां छात्रों के पूर्व ज्ञान के आधार पर भी समवाय करने में संकोच नहीं किया गया है।

प्रस्तुत नियोजनों की सीमाएं

उपर वर्णित नियोजनों का विश्लेषण करने के पश्चात एक प्रश्न सहज ही मन में उत्पन्न हो सकता है कि क्या प्रस्तुत नियोजन पाठ्यक्रम के निर्धारित प्रकरणों का समावेश समग्र रूप से कर लेते हैं ? ऊपर के विश्लेषण में स्पष्ट प्रतीत होगा कि प्रति दिन सभी विषयों का समावेश नहीं होता। किसी विषय को अधिक महत्व मिल गया है तो दूसरी ओर कुछ विषय सर्वथा उपेक्षित रह गये हैं। प्रकरणों की दृष्टि से भी अनेक आवश्यक प्रकरण छूट गये हैं। किसी किसी विषय में नवीन ज्ञान कुछ नहीं दिया गया अपितु पूर्वार्जित ज्ञान की आवृति मात्र हुई है।

जब हम इस प्रकार के अल्पकालीन नियोजन लेते हैं तो उसकी ये कमियां सहज ही रह जाती हैं। नियोजन विधि की इन मर्यादाओं को हम दृष्टि से ओझल नहीं कर सकते। इस विद्यालय के छात्राध्यापकों ने इन सीमाओं को ध्यान में रखते हुए शेष विषयों तथा प्रकरणों को पढ़ाने के लिये सामाजिक एवं प्राकृतिक वातावरण का भी प्रयोग किया। कुछ विषय स्वतन्त्र रूप से भी पढ़ाये गए। इस अवधि में जिन सामाजिक एवं प्राकृतिक अवसरों का उपयोग किया गया उनके कुछ नमूने इस प्रकार हैं। इस अवधि में प्रत्येक कक्षा को निम्नलिखित तीन अवसर समवाय के अन्य केन्द्रों के रूप में प्राप्त हुए :

दिनांक १ फरवरी १९६० वसंतोत्सव

दिनांक ९ फरवरी १९६० शाला का विशेष कार्य दिवस

भ्रमण—भिन्न-भिन्न कक्षाएं भिन्न-भिन्न तिथियों पर भ्रमणार्थ गई।

उपर्युक्त तीन अवसरों का शैक्षिक प्रयोग भिन्न-भिन्न कक्षाओं ने जिस प्रकार किया उसका विवरण इस प्रकार है :

दिनांक	प्रसंग	अर्जित ज्ञान
	कक्षा ८	
१-२-६०	वसंतोत्सव	वीरों का कैसा हो वसंत (कविता) वसंत का मानवीय भावनाओं पर प्रभाव (निबंध)
९-२-६०	विशेष कार्य दिवस	श्रम कार्य की रिपोर्ट लिखना।

	श्रमदान, सूत्र यज्ञ	द्विवर्ण समकालिक समकरण के प्रश्न

कक्षा ७

१-२-६०	वसंतोत्सव	मंडप की सजावट का कार्य, वसंत बहार एकांकी नाटक का अभिनय, कविता पाठ ।
९-२-६०	विशेष कार्य दिवस	चुटकुले तथा कहानियां पढ़ना तथा सभा में सुनाना ।
	श्रमदान, सूत्र यज्ञ	समूह की रिपोर्ट तैयार करना ।

कक्षा ६

३०-१-६०	गांधी निधन दिवस	गांधी जी की राष्ट्र सेवा विषय पर चर्चा तथा निबंध लेखन, गांधी जी के प्रिय भजनों का पाठ
१-२-६०	वसंतोत्सव	वसंत पर निबंध
५-२-६०	भ्रमण-पोलिटेक्निकल स्कूल हेंडीक्राफ्ट्स इंस्टीट्यूट तथा टेलीफून एक्सचेंज का निरीक्षण	काष्ठकला के विशेष औजारों का परिचय । टेलिफ़ोन एक्सचेंज की कार्यप्रणाली का ज्ञान सड़क पर चलने के नियम तथा सार्वजनिक स्थानों के नियमों को पालन करने की आवश्यकता । भ्रमण का सिंहावलोकन तथा रिपोर्ट लिखना ।
९-२-६०	विशेष कार्य दिवस	श्रमदान का सामाजिक जीवन में महत्व
	श्रमदान, सूत्रयज्ञ	सूत्रयज्ञ तथा श्रमदान का मूल्यांकन

कक्षा ५

१-२-६०	वसंत पंचमी	ऋतु परिवर्तन का ज्ञान
५-२-६०	भ्रमण	उदयपुर के महत्वपूर्ण प्राकृतिक सामाजिक एवं सांस्कृतिक स्थलों का अवलोकन तथा उनका ऐतिहासिक परिचय । बाग, धर्मशाला, बिजलीघर बाजार, पोस्ट आफिस, तार घर आदि की जानकारी । अजायबघर तथा पशु पक्षी शाला का अवलोकन तथा उससे संबंधित ज्ञान—जीवों का वर्गीकरण ।

		राजस्थान की शासन व्यवस्था, जल वितरण योजना आदि ।

कक्षा ४

१-२-६०	वसंत पंचमी	षट्ऋतु में वसन्त का महत्व, वसन्त ऋतु पर लिखी कविताओं का संग्रह
३-२-६०	भ्रमण	रेलवे ट्रेनिंग स्कूल, सिनेमा, धर्मशाला, स्थानीय विभिन्न उद्योग, अजायबघर पशुपक्षी शाला, पुस्तकालय, आदि स्थानों व उद्योगों का निरीक्षण तथा परिचय । भ्रमण का विवरण लिखना ।

कक्षा ३

१-२-६०	वसंत पंचमी	वसन्त ऋतु-निबंध, वसन्त पर कविता।
६-२-६०	भ्रमण—बेदला खंडसारी का कारखाना देखने जाना तथा बेदला गांव में नदी पर बने बांध का निरीक्षण	सड़क के नियम शक्कर कैसे तैयार होती है । पटवार खाने का परिचय ।
९-२-६०	विशेष कार्यदिवस	सांस्कृतिक कार्यक्रम में भाग लेना ।

कक्षा २

१-२-६०	वसंतोत्सव	रंग बिरंगे फूलों का परिचय हम रंग बिरंगे फूल काव्य नाटिका का अभिनय

इनके अतिरिक्त कुछ पाठों का स्वतंत्र रूप से भी अध्ययन करवाया गया। ऊपर के विश्लेषण से इतना स्पष्ट ज्ञात होता है कि छात्राध्यापक गृहीत नियोजन में इतने व्यस्त रहे कि सामाजिक एवं प्राकृतिक वातावरणों का जितना अच्छा प्रयोग होना चाहिये उतना हो नहीं पाया । सामाजिक एवं प्राकृतिक वातावरण भी समवाय की दृष्टि से अत्यन्त समृद्ध है और इनका प्रयोग बुनियादी शिक्षा को अधिक सम्पन्न बनाने में प्रभावोत्पादक रूप से किया जा सकता है ।

दूसरा प्रश्न उपस्थित होता है कि क्या बुनियादी शालाओं में सभी विषयों के अध्ययन में नियोजन विधि का प्रयोग किया जा सकता है, तथा क्या नियोजन विधि बुनियादी शिक्षा के सिद्धान्तों के अनुरूप होगी ?

बुनियादी शिक्षा का एक मूल लक्ष्य है छात्रों में योजनाबद्ध कार्य करने की आदत डालना तथा प्रत्यक्ष कार्य के अनुभव द्वारा ज्ञानार्जन कर सकना, ताकि

उस ज्ञानार्जन के फलस्वरूप कार्य में अधिक दक्षता आ सके तथा उस कार्य से उद्भूत होने के कारण ज्ञान अधिक स्थाई तथा उपयोगी हो सके । नियोजन वद्ध कार्य करने से इन लक्ष्यों की उपलब्धि होती है, अतः नियोजन विधि बुनियादी शिक्षा के सिद्धान्तों के सर्वथा अनुकूल पड़ी है ।

दूसरा प्रश्न है इसकी व्यावहारिकता का । बुनियादी शिक्षा में जिन्हें हम मूलोद्योग कहते हैं, उन्हें अनेक नियोजनों में विभक्त किया जा सकता है तथा समवाय में अधिक वास्तविकता लाई जा सकती है । बुनियादी शालाओं में अनेक सामाजिक, धार्मिक, एवं सांस्कृतिक पर्व आयोजित किये जाते है । इन आयोजनों को भी नियोजन के रूप में लिया जा सकता है, तथा नियोजन के रूप में ही इनका प्रतिपादन किया जा सकता है । **बुनियादी तालीम** के पिछले अंकों में इसका कुछ विवेचन हो चुका है ।

निष्कर्ष

बुनियादी शिक्षा की अध्यापन विधि को जिसे समवाय विधि कहा जाता है, अधिक वास्तविक बनाने के लिये आवश्यक है कि जिस प्रकार खंडित प्रवृतियों को लेकर आज समवाय किया जा रहा है उस पर पुनर्विचार करें तथा देखें कि उसमें क्रमबद्धता किस प्रकार लाई जा सकती है । इसके लिये नियोजन पद्धति पर आधारित कुछ बुनियादी पाठों का विवेचन किया गया है, जो वास्तविकता की ओर जाने का एक प्रयास है ।

SOCIAL ACTIVITIES AND COMMUNITY LIFE —THE BACKBONE OF BASIC EDUCATION

T. PAUL VERGHESE

The tempo of expansion and progress of Basic Education in the country as a whole has been irritatingly slow and far from satisfactory. The Scheme of Basic Education was launched nearly a quarter of a century ago and it is a disgrace that people in the country have not taken to it very kindly. The reorientation programme was then put into operation as a via media, to borrow an experts term "a betrothal before actual marriage". Even the reorientation programme or betrothal has not been taken seriously and the "marriage" is yet to be solemnised. It evidently shows that there are some fundamental defects with regard to the implementation of the scheme successfully. The main defects are :—

1. The tendency of schools to confine to one craft; so it does not cater to the various interests and aptitudes of the pupils. No authority can stand the strain of providing many crafts in a school on a state-wide scheme of primary education, let alone on a national scheme.

2. "Hurriedly-trained" or 'half-cooked' teachers teach occupations.

3. Entire department of education, not yet geared to such a programme.

4. Craft cannot be made nucleus for teaching all subjects. It cannot succeed as a methodology but can give students only skill and appreciation for art and culture.

One beacon light that shines brilliantly amidst the darkness of Basic education, is, the community life and social activities of the students. But it has not been given any serious emphasis

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From B.T., IV (4) Oct. 1961.

as it deserves.

In our primitive education, learning and living went together. Living is basic for learning. It was a complete education, not partial nor one-sided. In a wider sense, Basic education must emanate from living. Education remains fragmentary and narrow if it caters only for the needs of the mind, neglecting the physical and emotional aspects of the children. In our primitive education training consisted of factors of discipline and character formation; of idea of responsibility; of obligation to do something, to produce something. Education was simple but there was a sense of reality. Now not even a semblance of these is visible anywhere in our schools.

Common sense therefore dictates that our schools should be made a genuine form of active community life instead of a place set apart in which to learn lessons. In our school the motive and the cement of social organization are alike wanting. We hug the shell and throwa way the substance—the social spirit—of the school life.

Look at the products of our school. Our nation is to-day passing through a crisis of character. We have no sense of values. Corruption is rampant in all walks of life and the universities and colleges which are the temples of learning are not free from it. Bribery is only one of its forms; it takes many other forms which are no less insidious. Discipline has ceased to be a source of joy and pride. Teachers have lost their self-respect and students, their respect for the teachers. There is no zest for work, achievement is tainted by suspicion. Effort is replaced by less irksome substitutes. There was a time when we had stalwart men and women who believed something and stood for it, who had the courage of righteousness in public life. They died for their convictions and fought for their principles. To-day we follow the lives of least resistance, subtility and intrigue, wire-pully and demogoguey, shiftness in following expediency and make every effort to please all men. All this had a repercussion on our system of life and our students copying these are becoming incapable of meeting the urgent needs of our developing democratic society.

We may think aloud with Professor Dewey that the mere absorbing of facts and truths is so exclusively individual an affair, that it tends very naturally to pass into selfishness. There isno obivous social motive for the acquirement of mere learning. It leads to individual competition. The very corner-stone of Basic education (as far as I could see) lies in the social activities and community life of the school, instead of crafts. And it is this aspect that is sadly neglected and should be re-accentuated. Wherever we go and whenever we confer with people on Basic education, "crafts" loom large in the horizon of discussion. I do not find any sense in making education craft-centred but productive activities and occupations (not economically but educationally and socially) should find an all-important place in the scheme. Living together and doing together is the soul of education. We live in a world where all sides are bound together. All studies grow out of relations in the one great common world. Relate the school to life and all studies are of necessity correlated. Prof. Dewey proclaims : "The great thing to keep in mind, then regarding the introduction into the school of various forms of active occupation is that through them the entire spirit of the school is renewed. It has a chance to affiliate itself with life, to become the child's habitat, where he learns through directed living, instead of being only a place to learn lessons having an abstract and remote reference to some possible living, to be done in the future. It gets a chance to be a miniature community, an embryonic society. This is the fundamental fact, and from this arise continuous and orderly streams of instruction".

The aim is not the economic value of the primitive individual products, but the development of social power and insight. It is this liberation from narrow utilities, this openness to the possibilities of the human spirit, that makes these practical activities in the school, allies of art and centres of Science and History.

The main purpose of education is to train children in the art of living, living with others. Everywhere men are so intricately interdependent that the problem of co-operation has become supremely the critical question of the world. The schools have to recognise their responsibility for inculcating social sensitiveness in the minds of our pupils. In a very real sense the goals of education and the goals of democracy are similar. Therefore a philosophy of education must make the social aim of education the central article in its creed.

Democracy means effective participatory living in which everybody feels a responsibility to do their utmost. Therefore the community life of the school and its organisation is the very heart of the process of education for the development of worthy citizenship. Life that consists solely making a living is not worth living without social relationship. Knowledge alone does not present imperatives of conduct, nor kindling aspiration for the good life, nor necessarily exemplify it. Any type of knowledge can be employed either for good or bad, but the paramount importance is how it is used. Ethics (moral education) is therefore not a side issue of education but is a central concern, a concern that gives direction to the knowledge. To direct it for the benefit of humanity is possible only if one has the social consciousness and realises his civic duties. We therefore have to make the quickening of the moral sense a definite part of the education-system. Citizenship is a culture developed by training and the right emotional direction and a pattern of individual conduct which alone can help democracy to produce social happiness.

Public schools in England were mainly responsible for the development of the leadership in various directions and sturdy character among her people. If there was any good obtained out of public schools it is simply because of the community life the pupils enjoyed. The quintessense of Basic education lies in this aspect which is forgotten by most of our educationists. It will be a dead education if the heart is neglected and the body and mind alone are developed.

The Basic scheme envisages a close integration between the schools and the community so as to make education as well as the children more social-minded and co-operative. It endeavours to achieve this, firstly, by organising the school itself as a living and functioning community—with its social and cultural programmes and other activities; secondly, by encouraging students to participate in the life around the school and in organising various types of social service to the local community. Student self-Government is another important feature in Basic education which should be envisaged as a continuous programme of training in responsibility and in the democratic way of living. In this way, the Basic school not only helps in cultivating qualities of self-reliance, co-operation and respect for dignity of labour, but also becomes a vital factor in the creation of a dynamic social order. No nation can thrive without discipline, hard work, sharing responsibility, consideration for others and ethical character. When the school introduces and trains each child and society into membership within such a little community, saturated him with the spirit of service, devotion to duty, devotion to the principles of manhood and providing him with the instruments of deepest and best guarantee of a longer society which is worthy, lovely and harmonious.

TEACHING OF SOCIAL STUDIES IN BASIC SCHOOLS

R. C. SHARMA

Introduction

Basic education has been described as the 'spearhead of a silent social revolution'. It is expected to prepare the child for the role of helping social change aimed at bringing about a new cooperative socialistic order in the society. This devolves a heavy responsibility upon the workers in the field of Basic education and calls for sound educational leadership. Social studies assume an important role in this context, especially in promoting leadership behaviour and building understandings, attitudes and skills, necessary for the functioning of democracy.

The Concept of Social Studies

Social studies are said to indicate a field "whose content deals directly with human relationships."[1] They are concerned "with people and their interaction with their social and physical environment. In the social studies attention is given to the ways of living and working together, use of the environment to meet human needs, customs, institutions, values and life—situations—the cultural heritage and its dynamic on—going characteristics."[2]

The term 'social studies' seems to have acquired popular endorsement in educational parlance of this country about two and a half decades ago. Prior to that they were taught as

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[1] Monroe, Walter S. ed., *Encyclopedia of Educational Research*, New York, Macmillan & Co., 1950, p. 1213.

[2] Nichaelis, John U., *Social Studies for children in democracy*, New York : Printice Hall, 1956, p. 2.

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compartmentalized and separate subjects—history, civics and geography. It was with the inception of Basic education that the emphasis on this compartmentalisation was reduced. Accordingly, the Wardha Conference in 1937 recommended a unified programme of social studies by combining courses in history, geography, economics, civics, current events, and reverential studies of different religions of the world.

Objectives

The objectives of teaching social studies as delineated by All-India National Educational Conference, Wardha, are as follows:

"1. To develop a broad human interest in the progress of mankind in general and in India in particular.

2. To develop in the pupil a proper understanding of his social and geographical environment and to awaken the urge to improve it.

3. To inculcate the love of the motherland, reverence for its past, and a belief in its future destiny as the home of a united cooperative society based on love, truth and justice.'

4. To develop a sense of the rights and responsibilities of citizenship.

5. To develop in the individual and social virtues which make a man a reliable associate and trusted neighbour.

6. To develop mutual respect for the world religions."[3]

Broadly speaking, these objectives aim at building some understandings, developing certain atitudes and fostering essential skill. The building of understandings begins early in primary grades and as children develop more specific knowledge, abstract concepts can be given to them. The application of these to worthwhile and positive ends can be ensured through some ethical guide lines of behaviour in society. Attitudes provide a basis of these guidelines and it is for helping their development that Social Studies play an important role. Attitudes, again as the Social psychologists say are "affectively toned idea or group of ideas predisposing the organism to action with reference to specific attitude objects."[4] But, the action in itself for its performance, completion and consummation requires the person on action to possess some skills. The development of these skills, then, becomes an important task of social studies.

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[3] *Educational Reconstruction.* Wardha, Sewagram : Hindustani Talimi Sangh, 1938, p. 101.

[4] Remmers, H.H., *Introduction to opinion and attitude measurement.* New York, Harper and Brothers, 1953, p. 3.

Curriculum and Methods

Concomitant upon the objectives of Social Studies discussed here, the following understandings, attitudes, and skills may usefully determine their curriculum in a basic school.

A. Knowledges and Understandings

1. Understandings about the Indian heritage, the glories of her past, and present developments.
2. Knowledge about the functioning of local, state and central government, current events and civic problems.
3. Understandings about the right and responsibilities of citizenship.
4. Knowledge about the geographical environment of this country and of some salient geographical features of the world.
5. Understanding of the cooperative ways of working.
6. Understanding of the significant social and economic problems.
7. Knowledge of the different religions and cultures of the world.

B. Attitudes

1. Faith in democratic ideals.
2. Attitudes towards human welfare and social service.
3. Appreciation for group and cooperative work.
4. Love for motherland and respect for other nations and religions.

C. Skills

1. Skills in group and cooperative work.
2. Skill in scientific thinking and in the use of books and media of mass communication for gathering, organising and interpreting facts, figures and information.

The author has tried to analyse the various Indian syllabi in order to adjudge their validity in respect to the teaching of Social Studies as a fused and unified programme of instruction. In this connection the syllabi of Andhra, Bombay, Mysore, Orissa, Kerala, Punjab, Rajasthan, Madhya Pradesh, U.P., Himachal Pradesh and Delhi, were studied. It was found that except in one or two syllabi fusion is lacking in all others. The courses hardly seem to be consistent with the concept of Social Studies as a study of man's relationships with his immediate and distant environment. This shortcoming seems to have been obviated in the Delhi syllabus published in 1960. It tends to present a new approach in all the eight grades by breaking the barriers between the segregated and segmented contents from different disciplines. In many other states also such a unified approach has been attempted but it has hardly been achieved beyond some primary grades.

Besides, presenting an unified approach the Delhi syllabus also differs from other syllabi in its 'unit system of organisation'. It fits units consistently according to grade placements. Some units are topical while many are 'experience units,' 'units of work' or 'problem-centred units.' The criteria determining the choice of these units have been suggested as follows :

"(a) The unit is related to the current needs and problems of the society.

(b) It is conducive to the active, life-like, practical and creative learning.

(c) It is appropriate to the physical and mental development of the pupils."

The acceptance of unitary plan of organisation is relatively new. It was developed by Henry C. Morrison, who defines a learning unit as a "comprehensive and significant aspect of environment, of an organised science, of an art, or of conduct, which being learned results in an adaptation of personality."[5] Since then many types of units have been advanced. These are integrative units, units of work, problem-centred units, topical units and many others. A resource unit is prepared by teachers or other technical persons without keeping in view any parti-

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5. Binning, Arthur C. and Binning, David H. *Teaching the Social Studies in Secondary schools,* New York, Mc Graw-Hiil Book Co. Inc. 1952, p. 159.

cular group of children in mind. It is so planned as to cover "broad areas of content and always contains much more suggestions than could be used with any one class."[6] It is meant for the guidance of teachers. A teaching unit is one which is prepared for a specific group of pupils and is therefore based upon the interests, needs and competencies of the said group. In teaching units teachers generally utilise experience units, units of work, topical units or a combination of any two of them. These units have been defined succinctly by their protagonists. However, Hageman, and Potter, have defined an unit of work as "a purposeful learning experience focussed upon some socially significant understanding which will modify the behaviour of the learner and enables him to adjust to a life situation more effectively."[7] Still elaborate is the definition of experience unit given by Beek, Cook and Kearncy. They define it as "a cluster of educative experiences, organised through pupil-teacher planning placed within the functioning framework of the developing child, in his social and physical environment in terms of the needs and purposes of the child and his society and utilising to as great a degree as possible the useful resources of the material and cultural environment to the end that the democratically determined purposes of the schools may be achieved."[8] In basic education, the units of work, experience units and problem-centred units can be very consistently and advantageously used and have in fact been used many a time. The plan of work of a basic school utilises the experiences of the child in the social and physical environment and at productive work for imparting knowledge to him. These provide basis for the organisation of experience uuits which in the field of basic education are generally known as "correlated teaching units." Such units have been practised in this country. In some other countries similar units have been worked out and tried. But experience has shown that all the understandings and knowledge needed by pupils cannot be covered through them. This has formed a basis of criticism of the unit system. In the words of Ellsworth, "Life is not all lived in units, but also in strands, in interests, in jobs to be done.' Hill says 'Reading, writing, talking about and drawing airplanes at all hours, day after day, can become a monotonous and unrewarding experience.'[10] In answer to these criticisms the curriculum planners have suggested that it is not necessary that all the syllabus of an elementary school should be organised round 'units' but a substantial portion may be covered through them, the remaining may be covered through situations about which children have been concerned, for example, an incident on playground, a visit by some important person to the school and so on.

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[6] Jarodinek, John. *Social Studies in Elementary Education*, New York, Macmillan Co. 1959, p. 78.

[7] Ibid., p. 84.

[8] Ibid., p. 84.

[9] National Society for the study of Education. *Social Studies in the Elementary School*, Illinois, University of Chicago Press, 1957, p. 154.

Not withstanding the fact that unitary system of organisation is stimulating and makes learning more realistic, it cannot claim as being a panacea for all ills in the teaching of social studies. It may quite frequently be not possible to organise all the subject matter into suitable units, or to devote as much time and energy to the entire syllabus as is conceived under 'unitary system'. Nevertheless, since this system is situated to the psychological needs of the child and breaks the barriers between compartmentalised subjects, it may be useful to cover significant themes through it. The remaining syllabus may be covered through 'projects', 'problems', 'socialised recitations' and 'questioning'. Some teachers have found that the laboratory method which is commonly used in physical sciences is useful for teaching some topics of social studies. They say that schools where social studies laboratories do not exist, children can work in the reading room or library for sometime and then gather in the class room for discussions and further work. Great dissatisfaction is voiced against lecture and textbook methods. Lectures are criticised as leading to 'pupil passivity.' The teacher can however make his lessons stimulating by allowing discussions and getting 'feed back' from the pupils.

To make teaching realistic and more meaningful the use of teaching aids has been found to be very helpful. Not infrequently, they seem to be unavoidable when knowledge cannot be given directly through first hand expcriences. For this

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10. Ibid, p. 154.

purpose, contrived experiences—specimens, objects, models and mock-ups are generally found to be very helpful. Dramatisations—plays, pageants, sociodrama and role-playing—are often useful in giving certain concepts in which life is involved. Historical dramas, cultural shows, playlets based on the life of persons in a land (Eskimos, pioneers, tribal people etc. are examples of these)—seem to be quite useful. In many lessons role-playing proves to be a very effective teaching device. It is a sort of "unprepared and unrehearsed spontaneous dramatisation and can be used for teaching 'social roles' like those of community helpers—watchman, postman etc."[11]. The other teaching aids and devices which can be used in a social studies class are films, maps, charts, graphs, field trips, and excursions. Their use depends upon the resourcefulness of the teacher. The use of chalkboard as a teaching aid needs no reiteration and is as important in social studies as in any other subject.

Evaluation

No instructional process can be regarded as complete unless it incorporates a sound programme of evaluation. Such a programme makes learning more effective and determines how well the objectives of the educational programme are being achieved. It helps teachers understand and diagnose the weekness of pupils and plan the instruction accordingly. This diagnosing and planning is a continuous and cooperative process in which pupils freely participate.

Social Studies evaluation programme should measure, besides its other functional aspects, the progress of pupils in acquiring the understandings, attitudes, and skills. For the measurement of understandings and knowledge essay as well as new type tests are used. Essay is said to measure the expressional abilities and the competence in relation to the organisation of subject-matter. But because of its subjectivity it has to be supplemented with objective tests.

For measuring changes in attitudes a teacher may construct an informal attitude scale. On this scale he may find the scores of pupils once in the beginning of the session and then in the middle of the session and finally at the end. If it is not too much work for the teacher he may try to collect evidence on the change in attitudes before and after a unit has been taught.

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[11] Pareek, Udai. *Role playing as a technique of human relations training*. *Indian Journal of Social Work*, December, 1960.

Skills can better be assessed through observation of the pupils on the job. Observations can be planned for group performances also. Written work and assignments may also be checked and evaluated by the teacher.

The programmes of the teaching and evaluation of social studies in basic schools should promote better understanding of the pupils of social problems and processes, should help in developing in them desirable attitudes and values and should provide them opportunities to learn social skills.

BASIC SCIENCE TEACHING IN SOCIAL PERSPECTIVE

SURESHCHANDRA SHUKLA

Should teaching in Basic schools receive consideration apart from the problems of teaching in general? By the nature of the for-reaching changes proposed by the Basic scheme and by virtue of the difficult terrain—poor schools and rural communities—on which it operates there is a *prima facie* case for such consideration. The case is further strengthened by the fact that while the Basic pattern tends to emphasise real life environment as a major factor influencing programmcs and methods of instruction, the most forward-looking and conscious elements in the *milieu* tend to move out of this *milieu* under the impact of some specific features of Indian development to-day e.g. (a) democracy before industrialisation, (b) growth of a large whitecollar salariat before adequate advances in per capita national income, gross national product or techniques of production, (c) aspirations towards consumption patterns and modes of life of the industrialised or even affluent society right at the commencement of the developmental process. The weight of bureaucratic social and authoritarian uncreative educational tradition which is at least as old as British rule further accentuates the problems of teaching in Basic schools. This situation is often dealt with by our Basic educationists bravely as a challenge to be met squarely and the very situation is taken as an added argument for adopting the novel and revolutionary ways of Basic education. It is, however, a question the best strategy is frontal attack or tactical bypass. In the paragraphs that follow, an attempt will be made to consider this matter as illustrated by the teaching of science.

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from B.T., IV (3) July 1961

These remarks have necessarily to be taken as tentative and by way of hypotheses in the present state of knowledge in Indian sociology, particularly Indian rural sociology.

How scientific can the teaching of science in Basic schools be ? It has been argued that the method of activity as the medium of learning is common to science and Basic education. This is a positive factor. It might be as well to note, however, that the purpose which is expected to motivate the learner's activity is different in the two cases—knowledge, and the search for it in one case and product and skills in the other, even though the teacher's purpose might be identical in both cases viz., acquisition of knowledge and skills—manual—observational as well as mental. This divergence in pupil motivation might appear to presage difficulties in teaching but in actual practice these are perhaps minor and become significant only for pupils of high ability or grade-levels. Perhaps certain difficulties of method and approach, too, arise. Assuming, however, reasonably satisfactory working arrangements in this regard, let us see how this squares up with society or the community outside the school.

When a pupil participates in gardening or agricultural activity, following presumably the prevalent techniques, he has adequate opportunity to do things for himself, verify hypotheses on the basis of experiment and acquire scientific habits of thought and search for knowledge. (This is not to say this always does happen). When a scientific explanation of the phenomenon of rainfall is undertaken in actual situations and through experiments—this could well be repeated in non-Basic schools as well—the learner is again in a position to develop knowledge, manual and observational skills and skills in drawing conclusions. But the development of scientific attitudes of questioning beliefs, of preparedness to experiment, initiated as it will be by the learning process at school, often meet with resistance in the environment which fosters belief in the raingod or at least in fate (when rains fail and meteorologists do not have all the explanation). This calls for faith, belief and acceptance of authority in the form of elders' opinions or established tradition. We see, then, the development of a type of person who might have quite scientific attitudes in the field of science but has not achieved much transfer of this to other parts of his life. Here is a situation wherein the community resists the progressive influence of the school—a sutuation which should have been widely prevalent—but is, I believe, unfortunately not so-had the schools been really successful in their teaching.

One can also notice instances of a different character which are equally obstructive of the development of scientific attitudes. Thus, the practice and observation of poultry and dairy farming provides opportunity for an effective understanding in respect of reproduction among animals and a more rational understanding and appreciation of the nature of life in general. There is even a certain amount of robust lack of inhibition among many rural communities in this respect. However, the city-bred value of prudishness—it could well be original with some of the upper caste groups in villages—mainly among teachers and some sections of the local community inhibits the use of occasions like the birth of a young one to a cow or mating, for that matter, to develop the requisite understanding and objective attitudes. Even flowers and bees tend to become delicate subjects.

We have so far looked at the question from the point of view of what we Basic educators would want school science to do to the children and the community. It would be only realistic to see, too, what the communities would want of our science. From all accounts—and this statement is submitted with great diffidence—they could not care less. Science at school means little to them. Science in the form of public health facilities, to some progressive farmers in the form of agricultural improvement to the richer sections in the form of a flour or oil or cane crushing mill which could be installed for more effective processing of crops and more lucrative employment of domestic man power—these alone possess serious significance. Add to these science in the form of the wonderful and glamorous place called the town that it has built. In these, science at the Basic school appears to play no part. Nor for that matter does its craft or productive activity. For to the community, the big machine and technical or professional training appear effective and even the preparatory function of elementary science as taught at the Basic School does not appear to be fully appreciated. The school has, indeed, in traditional Indian society and through British days been characterised by the word, written or spoken, the word of the *guru* and the word of the book. The school is not yet widely appreciated for the work and activity it develops. Its credentials are valid in proportion to its success with the word and the examination of the higher schools loaded therewith. Real basic science comes out a back number on this score as presumably it should and as also do the crafts. And to satisfy these latter criteria we teachers verbalise science more than we should. (This is not to say that we could not do better if we were, as a group, more skilled than we are). We sell our own real wares viz. skills and attitudes in the bargain, as it were, alongside others more in demand viz., these that count for examinations. entrance to further education and ultimate flight from the rural *milieu*. In other words, while good Basic Science is conceived of as offering forward ideas and modern skills on the basis of not-so-modern crafts and life the communities want modern crafts or activities without forward ideas necessarily.

What to do with science, then ? If we are respectful towards the kinds of prejudices just described we should perhaps stick to more or less formal, traditional text-book-cum-demonstration methods in the classroom, do the conventional job expected of us efficiently but engage in a wide variety of activities es 'extras' to fulfil the objectives which we science teachers would hold to be of greatest consequence viz., manual—observational skills, scientific attitudes and knowledge in purposive meaningful activities. In the Basic school, however, many of these would tend to impinge on actual community life such as community sanitation and cleanliness, scientific tending of cattle, study and repair of tools and machines in use. This could bring about the desired transfer of skills and attitudes to other areas of life. This would be the tactic of bypass rather than frontal attack both in respect of community expectations from the school and in regard to the beliefs, and ways of thinking and life that it tends to preserve out of sheer inertia. This is presumably what is happening and coming about spontaneously in all schools seeking to respond to life as it is. It is decidedly a modification of the original bold lines of organising all learning in connection with work and life, a modification that arises both from lag between advanced pedagogic thinking and peoples' expectations of the schools and from the lag between the former and the response of schools thereto.

Let us take, for example, class VII or VIII in which a study of food and balanced diet is required. The good traditional teacher will discuss the question of the functions of various components of food, the need for a balanced diet and the ways making it up in the normal diet of the community by starting the discussion on the food of the children, their bodily functions, relate the two together by means of discussion and teaching aid and perhaps follow up the work with an assignment asking the student to evaluate the dietary of a few families and suggest modifications therein in the light of his understanding. If we want to follow the strategy of frontal attack we will have none of this. We shall straight call upon the class to survey the food habits of the locality, discuss these in the light of a brief theoretical understanding of food to be given by the teacher, perhaps conduct a few small laboratory experiments then proceed to run a compaign for healthier food, adopt good food habits and measure over a long period, if possible, its effects if any for healthier food. In the light our understanding of the maneoure of tactical by pass, however, we shall carry on classroom work exactly as the good traditional teacher would. But we might organise two school activities which will deepen understanding and lead to a more active development of skills and attitude as well as *capacity to use knowledge and principles* and not merely their accumulation. One will get refreshments (or mid-day meal if we must use the current jargon) during the recess period. In northern India this may mean the preparation of sprouted gram mixed with salt ginger, perhaps radish etc. The work will call forth for the why and wherefore of the process and lead to an understanding about proteins, vitamins and minerals Of course, the beneficial effects of this on health and ideas are too long range and complex to lead to any straight development of scientific attitude. A second activity could be a small picnic, or better, a week or month-long scout or other similar camp in which there will be opportunity grapple with the same issues. In fact this is likely to lead not only to an understanding of the principles of good diet but also the difficulties, financial, cultural, and those of the palate (taste) and the ways of meeting these. In this manner both objectives, the more bookish ones of traditional teaching and the progressive ones of Basic education will have been reached.

Similarly, in respect of the study of mechanical principles, the Basic educator believing in the line of frontal attack will perhaps establish liaison with agricultural extension workers of the area, find out which improvements in tools, implements and means of transport for marketing are being promoted. If these are relevant and acceptable to the community, joining in this work provides a good basis for school work. But this may not necessarily correspond to the limited number of principles rets levers and pulleys which are prescribed in the syllabus and will be expected to be mastered by pupils. The teacher who adopts the tactic of bypass will, therefore, give up the idea of following the work of the agricultural extension worker, develop his course on the basis of the bi-cycle, Persian wheel and other known devices which lend themselves to illustrating the prescribed principles. He will avoid getting involved with innovations which may perhaps not be finding much acceptance. He will insteand, use sparetime activities such as a hobby group concentrating on repair of tools and machines to develop skills and attitudes. He will organise trips to study the tools and machines in use in the locality.

In these instances, it has been assumed that there is time enough to undertake sparetime activities on an adequate scale. This is, true, by and large of the syllabi prevalent in most states. What is lacking, however, is teacher skill, motivation and in many cases, the very small material facilities that are needed. These last, too, can often be assembled or made use of where they exist within the locality.

It might be worthwhile to note that once parents and children are assured that the conventional job of covering the syllabus is being tackled satisfactorily, a considerable degree of child interest and even parental cooperation and support become available. These would help in contending against conservation in the community and lead to a gradual permeation of scientific attitudes and the development through the agency of the school such manual skills as are normally not considered to be its province or business. Let us note, too, that the community situation will not be equally difficult every where.

The approach advocated appears to be retreat from the more throughgoing original approach of Basic education. That would have been the only desirable and practical one to adopt. Had we adopted social changes as revolutionary as Gandhiji had advocated even if not the precise ones advocated by him. In our present gradualistic approach to industrialisation with limited social change, the existing educational structure at the higher levels as well as expectations of the people prevent the adoption any more radical innovations at the elementary level, i.e. in the field of Basic education.

TEACHING OF MATHEMATICS IN BASIC SCHOOLS

SALAMATULLAH

In the Basic school, mathematics like all other subjects of the Basic curriculum is primarily meant to make a citizen competent to live effectively, and not so much to form a basis for studying the subject at a higher stage of education, namely, the higher secondary or the university stage. It does not, however, mean that the mathematics lerrnt in the Basic school is not expected to be of any use for further study. On the other hand, this mathematics will form a solid background even for studying the subject at a higher stage insojar as this is the mathematics for daily use in the life of every citizen. What is implied here is that the course content of mathematics in the Basic schools is to be freed from the dead weight of the subject matter which though essential for higher studies is not of much relevance to our everyday life. All children after receiving Basic education, i.e. compulsory schooling, are not expected to proceed for higher studies and even those who get an opportunity to do so do not necessarily have to study mathematics. Therefore, it is not desirable to compel all children to learn the material which may not be of any use to them later and which they cannot meaningfully learn.

Objective of Teaching Mathematics in Basic Schools

In view of what has been said above, teaching of mathematics in the Basic school should aim at making children (a) understand those concepts and processes of mathematics which are needed to solve problems of our every day life relat-

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from B.T., IV (3) July 1961

ing to number and space, and (b) develop mathematical skills and use them to solve the quantitative and spatial problems that they meet in carrying out their craft work and other activities in the school, as well as in the home and the community.

These objectives have been emphasized also in the *Syllabus for Basic Schools.* published by the Ministry of Education, Government of India (Pamphlet No. 70). It outlines the following objectives of teaching various branches of mathematics in the Basic school :—

Arithmetic—The child should be able to use arithmetical rules in solving practical problems, for example, buying and selling things, weighing and measuring etc., he should also be able to keep home accounts.

Geometry—The child should be able to understand simple spatial relations. size and shape of object ; he should also be able to compare shapes and sizes of different objects and apply such knowledge to practical work such as making furniture, building houses, etc. Stress should be laid and utilising geometrical concepts in various ways ; for example, in making different kinds of tools for the crafts, in drawing, in surveying, in agriculture etc.

Algebra—The child should be taught to use algebraic symbols in arithmetic problems and to understand that the use of symbols and formulae are alternative means of expressing concisely and without ambiguity what can be expressed only at lenth otherwise.

It is hoped that if these objectives are achived during the period of compulsory schooling, every citizen will he able to solve the quantitative and spatial problems which he is usually expected to meet in his life.

How to Direct Learning in Mathematics

Learning is most effective and economical in terms of time and energy spent when it takes place in response to a felt need on the part of the learner. We know that children become mentally active and put in their best effort, when they have to solve a problem of their own ; and what ever they learn in the process of finding the solution of a given problem is meaningful and lasting. It is important, therefore, that principles and processes of mathematics should first be studied in the situations, which are real and significant to the children. For instonce, if a group of children get interested in weaving a rug or a carpet of a given size, they would certainly feel the need to estimate how much yarn of a particular variety is required of the purpose, before they start weaving. Further, they would need to calculate its cost ; and if it is to be sold at a certain percentage of profit, they would have to find out its sale price, and so on.

In order to make a mathematical concept meaningful to children it is essential that the situations in which the concept is experienced should be interesting, manifold and varied. It is not enough for instance, to limit the application of addition facts to the processes of spinning alone. On the contrary children should learn to use these facts in solving various kinds of problems relating to their games and sports, family life, transactions in their community and so on. In order to get a mathematical process or concept fixed up it is better to present new situations for its application rather than to repeat a preceding situation. The more a child feels that he can apply a concept successfully to various situations that he comes across, the more effective is his motivation for learning further.

Learning as a rule starts best in a meaningful situation. But it is not to say that child must always be presented with concrete materials to apply a mathematical concept. He must, on the other hand, be gardually made competent to use it in abstract form. In order to make it economical, learning should proceed from the concrete, to the abstract and the symbolic. It is, therefore, not only necessary but desirable to let children do sums involving abstract numbers after they have learnt the meaning and significance of the process concerned in a number of concrete situations. This procedure would save time and give ample opportunity to children for practice to ensure speed and accuracy.

It should be noted that learning takes place by stages. It is the end product of a continuous process. Immature responses and even mistakes are expected in the early stages, when a new concept is introduced. In the beginning, the teacher should, therefore, treat the mistakes as symptoms of incompetence on the part of children ; while in the later stages be should regard them as a subject for diagnosis and remedial work.

Technique of Correlation :

As indicated above learning is most effective, when it takes place in a meaningful situation. Happily the Basic school programme abounds in snch situations. Activities such as craft work, health and cleanliness programme, childrens' assembly (Bal Sabha) and students' government, social work in the community, field trips and educational excursions, celebration of national days and seasonal festivals, organization of school exhibitions, recreational, and cultural events, like plays and programmes, etc. provide invaluable opportunities for meaningful learning in the Basic school. All these activities involve learning and application of subject matter from different fields including mathematics in one way or another. Thus, whatever children learn would be integrally related to the activities concerned. This is known as "the technique of correlation" in Basic education.

There are numerous possibilities of learning mathematics through such activities as mentioned above. While children are planning any activity with the help of the teacher they would do well to specify what portions of various subject fields would come in for study or use during the period that particular activity is earried on. All the concepts, principles and and processes in mathematics involved in the activity concerned should be arranged in terms of their difficulty and time to be devoted to each of them.

A few examples of how mathematics is correlated with certain activities are given below.

Activity : *Carding and spinning.*

(a) Making a carding bow out of bamboo.
(b) Carding cotton and making slivers.
(c) Spinning on Takli and winding the yarn on the winder.

Mathematics Involved :

(a) Measuring the length of a carding bow use of the units of lengthyard, foot, inch, metre, etc.

Estimating the number of carding bows of the given length that can be made out of a given piece of bamboo. Application of compound division. Calculating the cost of one carding bow, being given the cost of the bamboo and gut (tant)-use of money, decimal system, compound addition and division.

(b) Weighing cotton :— Use of units of weight, viz, *Chhatank*, *Tola*, *Kilogram*, Gram etc. Calculating the speed of carding and of making slivers—use of a time piece, measures of time, viz., hour, minute ; unitary method in finding out speed.

Finding out wastage in carding—use of percentage.

(c) Finding out the quantity of yarn spun use of counting, simple addition, subtraction, multiplication and division (expressing rounds of yarn (*tar*) into yards)—Calculating wastage in spinning, use of percentage.

Maintaining record of carding and spinning.

Activity : Kitchen Gardening.

(a) Preparing beds.
(b) Manuring
(c) Sowing

Mathemctics Involved :

(a) Making a rectangular bed of a certain length and breadth.

(Calculating the amount of manure needed for one bed (being given the amount needed for one acre of land)—Finding out area of a rectangular figure ; use of unitary method, measures of weight, viz, maund, seer, kilogram, etc.

(c) Calculating the amount of seed needed for one bed (being given the amount needed for one acre of land)—use of unitary method.

Activity : Health and Hygiene Programme.

(a) Maintaining monthly record of children's weight.
(b) Maintaining quarterly or half-yearly record of children's height and chest.

Mathematics Involved :

(a) Weighing each child—use of measures of weight-pound. kilogram ; their in-inter-relationship.

(b) Measuring height and chest of each child, use of measures of length : foot inch-meter, centimetre, fractions of inch $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

These are only a few examples to show how as activity naturally leads to mathematics. Similarly there are possibilities of learning and using mathematics in various activities recommended for Basic schools ; and they must be fully utilized.

While emphasizing the use of the technique of correlation in Basic schools it must however, be borne in mind that there is also a need for formal teaching of mathematics. Systematic treatment and drill of various processes of mathematics are indispensable to build up an adequate background in order that the child may be able to solve numerical nnd spatial problems that occur in day-to-day life. Even the exponents of the activity—experience school realize that activities alone cannot provide sufficient competence in mathematics. Activities can at best contribute meaning and significance to learning. They cannot be substitute for systematic learning of a subject particularly mathematics.

The technique of correlation should not therefore, become a dogma. What is needed is to combine the better elements of formal teaching and teaching through activity. This can be done by organizing the mathematics syllabus in terms of subject matter sequences and objectives and using craft and other activities to give meaning and significance to the subject matter in hand and objectives in view. It is generally felt that the activity curriculum may be suitable for the early stages of the development of mathematical concepts insofar as it gives social and economic significance to much of mathematics. Therefore in the lower grades of a Basic school emphasis may rightly be laid on the activity principle of learning mathematics and on the techinque of correlation in teaching it. But in the higher grades where a fuller comprehension and greater application of mathematical processes in solving real problems are needed, a definite and systematic programme of teaching mathematics must be chalked out.

How to Determine Sequence of subject Matter in Mathematics

The most important consideration in arranging subject matter of mathematics should obviously be the inter-relationships of various items that make it easy to progress from one phase to another. These relationships are chiefly of two kinds (1) those that exist with in a topical sequence, and (2) those that join one topical sequence, to another.

The consideration of such relationships in respect of aranging other phases of mathematics sequentially may not be as important as it is in the case of the fundamental processes, viz., addition, subtraction, multiplication and division. For instance, in arranging the measures of length the logical sequence is obviously *inch*, *foot* and *yard*. But from the point of view of effective learning in a Basic school the most appropriate sequence is *foot*, *inch* and *yard*. There the child has the concept of *foot* first, when he uses the one foot long winder and counts the rounds of yarn on the winder and records his amount of work in *feet*. Similarly in the case of simple fractions the most natural sequence is $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ rather than $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. For the child grasps the concept of $\frac{1}{2}$ more easily than that of $\frac{1}{4}$. As a rule arrangement of the material according to use a mere natural learning procedure and teaching sequence than that made in relation to size.

There are some other factors which are taken into consideration while arranging subject matter in a teaching sequence. One of these is relative difficulty of operation. Other things being equal, easy topics should precede difficult ones. Similarly in arranging the teaching sequence factors like *interest* and *stage of growth* of pupils should be considered insofar as they have been investigated and found reliable.

How to Previde for Individual Differences among Pupils

Ideally every child should be allowed to progress at his own best rate of learning. But there are such glaring individual differences among children of a given grade particularly in the matter of learning mathematics that it is not possible to carry out this principle in actual practice. The children of a grade can, however, be placed in "ability groups" to facilitate the job of the teacher and to provide suitable conditions for learning to each group. The children in the higher ability group may almost be left on their own to solve harder problems, after they have been initiated into a new process or operation along with the rest of the class. They will naturally progress further and faster. The very bright ones of this group may profitably be assigned to help individually the weaker ones of the lower-ability group. Of course the latter must receive the utmost attention of the teacher. This group should, however, be contented with the minimum essentials of mathematics—only those rudiments which are of use in ordinary life. The average ability group constitutes the main section in a grade. The teacher while presenting a new mathematical concept or process keeps the standard of this group in view. He expects the childern of this group to achieve the goals set for the grade.

Teaching Aids and Devices

Concrete materials available in the school and its neighbourhood should be used in developing meanings of whole numbers and four fundamental processes (formulation of mathematical tables). In teaching common and decimal fractions materials like apple, orange, ribbon, tape, foot ruler, etc. come very handy.

In order to make mathematics really significant for children-the teacher must study carefully the ways in which it is used in the home, school, and community, and then devise methods to make children aware of a variety of life situations in which mathematics functions. By organizing a stationery shop, a tuck shop or a children's bank in the school much of business arithmetic can be brought home to children most effectively.

Drill and Review

In mathematics there are certain things such as tables of addition, subtraction, multiplication, etc. which need to be memorized by heart because of their frequent application. These are basic to solving any numerical problem. Therefore, automatic response is demanded whenever the child is confronted with them. In order to ensure such a competence on the part of the child he is generally made to repeat them *ad nauseum.* Experience has, however, shown that sheer repetition is ineffective and a waste of energy and time. Unless thinking and attention are associated with the process of memorization, the things memorized are of little value. It is, therefore, said that responses should not be mechanically made mechanical, they should be made mechanical with understanding. Then, the teacher would not make that usual complaint the children could do abstract sums but they failed to solve mathematical problems.

In order to make drill effective, children must be made to realize its purpose. This can be done by making the practice a part of something the children recognize as useful. For instance, children in the Basic school feel the need to learn the addition tables early for keeping the record of their craft work. Here is a situation which naturally provides the purpose for drill in addition combinations.

Further, readiness depends upon the self-confidence of the child in his ability to do the task in question. This is possible only when he expects success in his efforts. Therefore, an element of familiarity must be present in the new situation demanding drill of any kind. If the child has already learnt to enjoy counting, he could be made to learn addition facts easily, for he would have a fair hope of success in the new task.

Examination and Evaluation

Examinations in all school subjects including mathematics are generally administered with one aim in view, namely, to assess how much of the subject matter prescribed for or taught in a grade has been learnt by individual children. It is, however, a very limited aim of examination from the educational point of view. Educationally it would be a sounder thing in principle as well as in practice to relate examinations to teaching at all stages rather than to keep them apart, as is the usual case.

The term examination has assumed a definite connotation —measurement of the knowledge and skill. This does not cover certain important objectives of learning, such as ability to reason out, to understand the inner significance of a given situation, to think critically, etc. so a comprehensive term 'evaluation' is now used to encompass all the objectives of learning. Further, the function of evaluation is defined to help and direct learning. Thus teaching and evaluation become inseparable and mutually inter-dependent.

Teaching and evaluation should both start with and aim at all the outcomes of mathematics considered worthy of attainment. How far an expected outcome has been attained is to be judged by a suitable technique. It is obvious that all the outcomes of learning mathematics cannot be assessed through paper-and-pencil tests. Other techniques of evaluation such as observation, interview, conference, etc. which can yield evidence for the attainment of a given objective should be used wherever necessary and appropriate. Evaluation procedures should in all cases be adopted to the purposes for which they are most suited. Another thing to be borne in mind is that evaluation must be a continuous process. It should go hand in hand with the process of learning and teaching, that is, evidence on learning ought to be collected daily—occasionally by tests and frequently by informal procedures, such as class work, home work, discussion, etc.

The conception of evaluation that has been indicated above obviously places a heavy responsibility upon the teacher. The main function of evaluation is directing the learning process effectively. For this the teacher will have to use all the evaluation procedures to the optimum advantage. These will include standardized tests, locally prepared paper—and pencil tests, continuous observation and enlightened questioning of children while they are engaged with their daily work in mathematics. It suitable remedial measures for the difficulties discovered are accepted at proper times, mathematics would no longer remain a bug-bear to children, as it is today; it would on the other hand, become a pleasant pursuit for them.

CLASSROOM MUSEUM IN BASIC SCHOOLS

J. H. SINGH

There are various misconceptions prevalent in the community, even among Basic education personnel, about what constitutes Basic education. No doubt the Government have, from time to time, tried their best to define, in no ambiguous terms the whole concept of Basic education and to make their stand and intentions clear. But whether this concept as defined by educational administrators has at all permeated the whole structure of Elementary education in India is a different matter.

The fact is that we have been talking too much about Basic education. Granted that an experiment of the nature and proportions of the reconstruction of Elementary education on the Basic pattern, bringing in its wake revolutionary changes in the aims and methodology of education needed at all levels and in all areas of leadership lot of serious thinking and re-thinking in terms of experiences gained to fashion further developments along more fruitful channels; but we could certainly have managed to talk less and work a little more. As it is, the attempt at reconstruction of Elementary education has been loud and vociferous : the criticism from the opponents of Basic education even louder. Also, since in the accepted national pattern of education the concept of craft as the centre of education, manual work, and correlation of subjects have been favourite centres of attack by the critics of Basic education, these ingredients of Basic education have earned an eminence completely out of proportion.

No doubt Basic education means craft centred education, it means manual work and socially useful activities, it means as

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well correlation but that is not all and to the exclusion of everything else. Basic education intends ultimately (that is when the country can give to education the budgets it needs) to be system that would meet all the needs—social, cultural, emotional and spiritual—of children, using all those educational techniques that are now tried and time-honoured, giving all the modern facilities to its scholars in the form of good buildings, school libraries, science laboratories, geography rooms, audio-visual equipment and other tools besides. At the moment, however, with limited budgets to operate upon we have to manage with the shoe strings and not indulge in flights of fancy. A compromise has to be found : we have to do all that lies in the human spheres leaving for the time being educational budgets aside.

Classroom museums are a thing that we can do unhindered by government sanctions and in elementary schools they can play a significant role in school life and curriculum.

As most of the teachers are aware the concept of museums too, has, changed during the past few decades. In the first place they have become active instruments of community education—formal and informal. They are no more places with armed guards treasuring strange old antiquities, the relics of a past grandeur, places to be visited only by the highbrows. The museum has been, in a sense, socialized. They are designed today for every one—intellectual, scholar, housewife, labourer. On the other hand they have been decentralized. We have now science museums, art museums industrial museums, and so on. Again, in countries, more fortunately placed than we are, there is a network of museums for the community—national museums, regional museums, city museums, school museums and last of all classroom museums with which the statement is concerned.

Classroom museums are so called for want of another name. They are in fact a collection of things—stones, insects, toys, metal objects, pictures, models, etc. collected by the teacher and the pupils and arranged in the classroom around a particular lesson.

Every classroom teacher can start a classroom museum, for as already stated, it does not reauire any money or a departmental sanction. At the same time it is an activity which children are found to enjoy, always.

A classroom museum must always be built by the collective efforts of children. They should themselves make collections, mend and mount them, or prepare exhibits under the teacher's guidance. Apart from enlisting the children's interest this results in teaching through activity. There are lots of things the teacher can make for the museum. In our Basic school at Putligarh, Amritsar, the school collection included many exhibits which the teachers had prepared during their professional training and had been permitted to bring to the schools to which they had been posted. Children's homes are another very important source of exhibits. Children brought from homes old coins, specimens, toys, various types of pots and pottery, and clothes. It was also found that borrowing exhibits from homes resulted in community interest in the school—a very desirable thing to happen.

A classroom museum must always be built around a particular topic or theme. It should not be a mere collection of odds and ends. It should have a design—may be pictures and plaster busts of popular Indian leaders, may be utensils and pottery, may be only toys to illustrate a story from the primer.

This will also mean that your museumes always keep on changing : they are ever new and not stale collection of dust-catchers.

A museum, again, is not a heap of things and it is a display. It is important that your museum should be properly set up. Here again what is required is not money but ingenuity. A small table or an old packing box with some cloth or a newspaper sheet spread on it will give you a good exhibition counter. Coloured clippings from magazines, old rags fron homes, pieces of cane and grass can be used to make a good display. Here again the students should be allowed to work themselves and the opportunity should be utilized to teach them principles of colour combination and simple display techniques.

Such a museum if well organized will be found to claim the interest of every child in the class and will result in a worthwhile educational project that will also be a joy to do.

सामुदायिक नृत्य : एक शैक्षणिक क्रिया

देवीलाल सामर

शैक्षणिक नृत्यों की ओर हमारे देश में बहुत कम लोगों का ध्यान गया है और जहां भो नृत्यों का शिक्षण हो रहा है वहां बच्चों को नृत्य की शिक्षा देने का ही प्रमुख ध्येय रहता है। किस उम्र के बच्चों को किस प्रकार के नृत्य की आवश्यकता होती है और उससे उनका भाव-शिक्षण किस प्रकार हो सकता है, इस ओर कुछ ही शिक्षाविद् जागरूक हैं। नृत्य-शिक्षा में न तो सिखलाये जाने वाले नृत्य की और न उसे सिखलाने की शैली और सिखलाने वाले अध्यापक की ओर ध्यान दिया जाता है। स्कूल के विशिष्ठ समारोहों तथा सांस्कृतिक प्रतियोगिताओं में बच्चे शरीक हो सकें और स्कूल को उससे समुचित ख्याति मिले यही ध्येय प्रमुख रहता है। शास्त्रीय शैली के अत्यंत वैयक्तिक, शास्त्र-प्रधान तथा मंतव्गहीन नृत्य सिखला कर कभी कभी बच्चों की स्वस्थ अभिरुचि को भी सदा के लिये खत्म कर दिया जाता है। वे शास्त्र और तंत्र के जंजाल में इतने अधिक फंस जाते हैं कि नृत्य के भावात्मक पक्ष से वे प्रायः अछूते से रहते हैं और कभी कभी शारीरिक चाल ढाल की दृष्टि से भी उनमें अनेक ऐसी विकृतियां आ जाती हैं, जो कभी भुलाये भी नहीं भुलाई जा सकतीं।

स्कूलों में नृत्य और संगीत की शिक्षा बच्चों को व्यवसायिक कलाकार बनाने के हेतु नहीं दी जातीं; वह केवल बच्चों के भावात्मक विकास के हेतु ही दी जाती है। इस उद्देश्य को सामने रख कर अनेक उन्नत देशों में नृत्य शिक्षण की अत्यंत वैज्ञानिक परिपाटी अपनाई गई है, जिसका सूत्रपात बच्चों के विविध शारीरिक अवयवों को समन्वित करने की विशिष्ठ नृत्य-शैली से होता है। यूरोप के अनेक विशेषज्ञों ने इस दिशा में अत्यंत महत्वपूर्ण कार्य किये हैं। बच्चों के अंग प्रत्यंग की अत्यंत रंजक और मनोहारी क्रियाओं में लयबद्ध व्यायाम का अंश डालकर उसे सार्थक बनाया गया है। ये क्रियाए विविध आयु के बच्चों की शारीरिक, मानसिक और भावात्मक आवश्यकताओं

Form B.T., V (4) Oct. 1962

को देखकर नियोजित की गई हैं, जिनके साथ संगीत और ताल जोड़कर एक विशेष नृत्य क्रम को विकसित किया गया है। संयुक्त नृत्य क्रम को यूरोप के अनेक देशों ने अपनाया है और उसे एक अत्यंत वैज्ञानिक स्वरूप देकर "युरीद मिक्स" के नाम से अत्यंत लोक प्रिय बनाया गया है। यह विशिष्ठ क्रम वैयक्तिक न होकर मूलतः सामुदायिक है और विविध आयु के बच्चों के लिये उसके विविध क्रमों को वर्गीकृत किया गया है।

संगीत, नृत्य तथा व्यायाम की भारत में अन्य देशों से एकदम भिन्न शैली होने के कारण, इस पद्धति का समावेश हमारे यहां नहीं हो सका; परंतु हममें से किसी ने भारतीय कला-परम्पराओं के अनुरूप किसी व्यायाम-संयुक्त नृत्य क्रम को जन्म नहीं दिया। उदयपुर में भारत की सुप्रसिद्ध संस्था विद्या भवन में आज से १५ वर्ष पूर्व लेखक ने एक बहुत ही महत्वपूर्ण प्रयोग किया था, जो कुछ ही समय में अत्यंत लोकप्रिय बन गया। उस समय भारत के वर्तमान शिक्षा मंत्री डा० कालूलाल जी श्री माली इस संस्था के प्राधानाचार्य थे और मुझे उनके सहायक होने का सौभाग्य प्राप्त था। डा० श्रीमाली की प्रेरणा से यह प्रयोग अत्यंत सफल हुआ। तत्कालीन शिक्षा-सचिव तथा वर्तमान सस्कृति मंत्री प्रो० हमायूं कबीर ने भी उस वृहद् प्रयोग को देखा था और उसके व्यापक प्रचार और प्रशिक्षण की ओर उन्होंने अपनी अभिरूचि प्रकट की थी। यह प्रयोग था विविध आयु के बच्चों के लिये व्यायाम्-संयुक्त सामुदायिक नृत्य का। इस प्रयोग को तीन भागों में बांटा गया था। एक अत्यंत छोटे बच्चों के लिये, दूसरा बीच की आयु के बच्चों के लिये और तीसरा १५ से १८ वर्ष की आयु वाले बच्चों के लिये। प्रथम वर्ग का प्रयोग बच्चों की साधारण उछल कूद के साथ सार्थक तथा ताल-बद्ध संगीत को संबद्ध करने का था। बच्चे नियोजित क्रियाओं में उछलते थे और संग में तत्संबंधी गीत गाते थे। इस प्रयोग के अंतर्गत अनेक बच्चे एक साथ संगीत तथा तालबद्ध क्रियायें करते थे और खेल तमाशे में ही बिना मानसिक और शारीरिक थकान के अंग प्रत्यंग को संचालित करते थे। द्वितीय वर्ग में अधिक नियोजित और विभिन्नतायुक्त नृत्य-क्रियाओं में संगीत के संयोग से सामूहिक व्यायाम का स्वरूप दिया जाता था, जिसमें बच्चों की भावात्मक शिक्षा के साथ सुगठित शरीर बनाने की पूरी क्षमता थी, उच्चतम वर्ग के सामूहिक नृत्य-संयुक्त व्यायाम में सबसे अधिक निरालापन था। उसमें मुख्यतः भारत के अत्यंत सुन्दर और क्रिया-प्रधान लोकनृत्यों की प्रधानता थी। इन तीनों प्रयोगों के साथ ही प्रचलित व्यायाम की सामूहिक क्रियाओं के साथ उपयुक्त संगीत और ताल को संयुक्त करना भी शामिल है।

भारतवर्ष लोकनृत्यों की रंगीनियों का देश है। विविध राज्यों में विभिन्न

प्रकार के रंगीन नृत्य हैं, जिन्हें असंख्य नर नारी आज भी अपने स्वस्थ मनोरंजन का साधन बनाये हुये हैं। प्रत्येक राज्य की अपनी-अपनी विशेषतायें हैं। राजस्थान का "घूमर" "घूमरा" तथा "गैर" सामूहिक नृत्यों की दृष्टि से अत्यन्त लोकप्रिय नृत्य हैं। गुजरात के "गरबा और रास" नृत्य को तो राष्ट्रीय नृत्य बनने की क्षमता प्राप्त है। पंजाब के "भांगड़े" का तो कहना ही क्या है; नव युवकों के अंग प्रत्यंग को इस नृत्य के माध्यम से उल्लसित आनन्द उपलब्ध होता है। इसी तरह उत्तर प्रदेश के "कजरी" "विजय" तथा हिमाचल प्रदेश के "श्री खंटन" जैसे नृत्यों में कूट-कूटकर सामुदायिक गुण भरे हैं। बिहार के "डौल" तथा उरांव जाति के "भूमर" नृत्यों में समुद्र के अंतराल से निकली हुई तरंगों की गंभीरता है। इधर आंध्र के "बणजारा" और केरल के "कणियाकेलि" और मणिपुर के "लाहिरोबा" आदि सामूहिक नृत्य राष्ट्र की अनुपम धरोहर हैं। इधर मध्य प्रदेश के बस्तर क्षेत्र के रहने वाले आदिवासियों के विभिन्न सामूहिक नृत्य तो भारत के अन्य सब लोकनृत्यों से बाजी ले जाने वाले नृत्य हैं। जिस देश में लोक नृत्यों का अक्षुण्ण भंडार भरा है, वहाँ शैक्षणिक नृत्यों की पृष्ठभूमि अब तक क्यों नहीं बन सकी, यही आश्चर्य की बात है...इसका मुख्य कारण है हमारे सामाजिक जीवन की संकीर्णता और नृत्य के प्रति हमारी अवहेलना की भावना।

विद्या भवन, उदयपुर में जब सामुदायिक लोकनृत्यों की दिशा में प्रयोग किये गये तो लेखक को बच्चों के माता पिता की ओर से अनेक कठिनाइयों का सामना करना पड़ा। सर्व प्रथम वहाँ अनेक लोक नृत्यों पर परीक्षण हुये और यह जानने की कोशिश की गई कि उनमें मनोरंजन प्रदायिनी क्षमता के साथ अत्यन्त सुगम और सरल ढंग से अंग प्रत्यंग को व्यायाम प्रदान करने की योग्यता है या नहीं, इसके साथ ही इसका भी परीक्षण किया गया कि उनमें सामुदायिक नृत्य के गुण विद्यमान हैं या नहीं। सामुदायिक नृत्यों में हेल मेल, पारस्परिक प्रेम और सहयोग की भावना का सर्वोपरि स्थान रहता है। ये नृत्य अत्यधिक सरल, मनमोहक तथा अंग प्रत्यंग में उल्लास और आनन्द की तरंगें उत्पन्न करने वाले होते हैं। लय प्रधानता उनका प्रमुख गुण है और अंग संचालन की क्लिष्टता से वे दूर रहते हैं। शैक्षणिक उपयोग के लिये ऐसे ही नृत्यों का चुनाव होना आवश्यक है। इन नृत्यों के साथ प्रयुक्त होने वाले गीत भी स्वर और शब्द की दृष्टि से सरल और सार्थक होने चाहिये, ताकि छोटी से छोटी उम्र के बच्चे भी आसानी से उनकी अंगभंगिमाओं को आत्मसात कर सकें। बीच की उम्र के बच्चों के लिए कुछ अधिक कलात्मक नृत्यों का चुनाव किया जा सकता है।

इन नृत्यों का प्रशिक्षण सर्व प्रथम शैक्षणिक संस्था के व्यायाम-विशेषज्ञ

या अन्य किसी अध्यापक को किसी परम पटु नृत्य विशेष से प्राप्त करना चाहिये, जो नृत्यों की भावात्मक पृष्ठभूमि को समझता हो और, जिसका स्वयं का अंग संचालन बहुत ही शुद्ध और सात्विक हो । नृत्य शिक्षक का चुनाव यदि सावधानी से नहीं हुआ तो नन्हें नन्हें बच्चों को कल्पनाहीन और योजनाहीन नृत्यों से उत्पन्न हुई भावात्मक प्रतिक्रियाओं का शिकार होना पड़ेगा और गलत नृत्यों से डाली हुई शरीर की चाल-ढाल संबंधी गलत आदतें जीवनभर नहीं छूटेंगी । नृत्यों का चुनाव करते समय पदचापों तथा शरीर की विविध भंगिमाओं की क्लिष्टता से बचना बहुत जरूरी है। पदचाप जौर शरीर की चालों में समन्वय पैदा करने की क्लिष्टता भी प्रारंभिक सामुदायिक नृत्यों के लिये एकदम, घातक सिद्ध हो सकती है ।

नृत्य शिक्षक को मनोविज्ञान और शिक्षा विज्ञान का भी ज्ञाता होना आवश्यक है । यह कार्य नीरे नृत्यकार या केवल कसरती पहलवान पर भी नहीं छोड़ देना चाहिये । प्रत्येक सामुदायिक नृत्य में अंगभंगिमाओं के समन्वय तथा बच्चों के भावात्मक विकास की कितनी क्षमता है, यह देखना अत्यन्त आवश्यक है । उससे उत्पन्न होनेवाली भावात्मक तथा शारीरिक प्रतिक्रियाओं को देखने की योग्यता भी शिक्षक में प्रचुर मात्रा में होनी चाहिये : उसे यह भी ज्ञात होना चाहिये कि नृत्य द्वारा व्यायाम की शिक्षा प्राप्त करने वाले बालक पर सामाजिक दृष्टि से क्या परिवर्तन हुये हैं। बहुधा सामुदायिक नृत्य करनेवाले बालकों में सहिष्णुता, समानता और सहयोग की भावनाओं का सर्वाधिक विकास होता है । गलत तरीके से सिखलाये हुए ये ही नृत्य ईर्ष्या, द्वेश और पारस्परिक वैमनस्य के भी कारण बन सकते हैं । सामुदायिक नृत्य सिखलाते समथ वैयक्तिक रूप से किसी बच्चे की प्रशंसा भी अन्य बच्चों में द्वेष की भावना पैदा कर सकती है । प्रशंसा का पात्र किसी बाल विशेष को नहीं बनाकर समस्त दल को बनाना चाहिये । बच्चों के वर्गीकरण के समय ही बच्चों की अभिरुचि तथा सिखलाये जानेवाली नृत्य की प्रकृति पर पूरा विचार कर लेना चाहिये और उसी के अनुसार उन्हें सामुदायिक नृत्य की शिक्षा देनी चाहिये ।

प्रशिक्षक को यह भी पूर्णतया ज्ञात होना चाहिये कि केवल नृत्य की शिक्षा के लिये ही सिखलाये जाने वाले नृत्यों में और शैक्षणिक सामुदायिक धृत्यों में बड़ा फर्क है । इस दूसरी श्रेणी के नृत्य केवल अंगभंगिमाओं तथा पदचापों से ही संबंधित रहते हैं, भावाभिनय तथा भावाभिव्यक्ति से उनका कोई संबंध नहीं होता, न उनमें अंग भंगिमाओं द्वारा किसी विशिष्ठ अर्थ तथा तात्पर्य प्रकट करने का ही उद्देश्य रहता है । उनमें केवल हाथपांव, शरीर, कमर, कंधे तथा गर्दन के समन्वित संचालन की योजना निहित रहती है,

जिसका प्रयोग एक ही साथ अनेक बच्चों पर अत्यंत वैज्ञानिक ढग से किया जाता है। प्रत्येक प्रचलित लोकनृत्य तथा सामुदायिक नृत्त में शैक्षणिक नृत्य बनने की क्षमता नहीं होती। कुछ ही में वह गुण विद्यमान होता है, जिनके पीछे अनेक वर्शों की सामुदायिक परंपरा विद्यमान रहती है। जैसे ही नृत्य बच्चों की आपु, मानसिक, शारीरिक, तथा भावात्मक आवश्यकताओं के अनुसार किसी चतुर शिक्षाविद्‌ द्वारा वर्गीकृत किये जा सकते हैं।

इस दायित्वपूर्ण कार्य के लिए एक दूसरी योजना और है, जिसका संबंध प्रचलित या परंपरागत लोकनृत्यों से नहीं होता। कई अनुभवी शिक्षक बच्चों की आयु तथा भावात्मक आवश्यकताओं के अनुसार ऐसे सामुदायिक नृत्यों की श्रेणी में आ जाते हैं। ऐसे नृत्य शैक्षणिक दृष्टि से अत्यंत महत्वपूर्ण होते हैं, क्योंकि दे नियोजित ढंग से विविध अंगों को कसरत प्रदान करने तथा सामुदायिक गुणों के विकास की दृष्टि से ही बनाये जाते हैं...जैसे नृत्य विशिष्ठ दुर्बल अंगों को सुधारने तथा बच्चों की विशिष्ठ असामाजिक आदतों का परिमार्जन करने की *ष्टि से भी रचे जाते हैं और उन्हें विशिष्ठ बच्चों को ही सिखलाया जाता है, जिन्हें उनकी आवश्यकता होती है। ये नृत्य सामुदायिक गुणों से तो परिपूरित होते ही हैं, परंतु उनकी विशेषता उक्त उद्देश्य की पूर्ति में ही होती है।

सामुदायिक व्यायाम को भी नृत्य संगीतमय बनाया जा सकता है। यह प्रयोग इन दिनों अनेक विद्यालयों में स्थान प्राप्त कर रहा है। व्यायाम शिक्षक केवल सीटी के संकेत से व्यायाम संचलित करता है, उससे बच्चों में स्वतः व्यायाम करनें की रुचि जागृत नहीं होती। यदि सीटी और गिनतियों के संकेत समाप्त कर दिये जावें तो सारा सामुदायिक व्यायाम ही नष्ट हो जावे। ऐसे प्रयोग में साज-संगीत का सहारा लेना अत्यंत आवश्यक है। इसके लिये किसी अनुभवी संगीत अध्यापक की आवश्यकता होती है, जो व्यायाम के अनुकूल ही लय प्रधान स्वर-संयोजन की व्यवस्था कर सके। ऐसी धुनों की रचना करे, जिससे बच्चों के हाथ पाँव बिना सीटी और गिनती के प्रयोग से निर्धारित क्रम में स्वतः ही उछल सकें।

इस जगह एक सुझाव और है। चतुर व्यायाम शिक्षक जिसको नृत्य संगीत का भी पूरा अभ्यास होता है, इन व्यायायों को सरल सामुदायिक नृत्य का रूप दे सकता है। ऐसे व्यायामों में हाथ पांवों का झटकेदार और खटकेदार संचालन बहुधा बच्चों को अरुचिकर होता है। चतुर अध्यापक इनमें तनिक लोच और मोड़ देकर इन खटकों को कलात्मक बना देता है, जो व्यायाम करने गाले बच्चों में रंजकता उत्पन्न करते हैं। ऐसी संगीत नृत्यमयी कसरतें बच्चों में घंटों तक भी थकान पैदा नहीं करती।

सामुदायिक नृत्य तथा व्यायाम की रूप रेखा, जो ऊपर बतलाई गई है, उसका पाठ्यक्रम के रूप में नियोजन पहले से कर लिया जाता है। अंग-भंगिमाओं, अंग संचालन, पदचापें, स्वर संयोजन. गीत, ताल आदि की योजना बच्चों की आयु तथा उसकी भावात्मक आवश्यकताओं के अनुसार बना ली जाती है। नृत्य और संगीत दोनों की स्वरलिपियाँ पहले से तैयार कर ली जाती हैं, ताकि नृत्य संगीतमय व्यायाम की यह योजना व्यायाम शिक्षक और व्यायाम करने वाले बच्चों की तात्कालिक सूझ और कल्पना पर ही निर्भर नहीं रहे। इस दिशा में अभी हमारा देश बहुत ही पिछड़ा हुआ है। यह कार्य हमारे शिक्षाविदों को तुरन्त ही हाथ में लेकर योग्य नर्तकों तथा व्यायाम शिक्षकों को सुपुर्द कर देना चाहिये। जैसा एक प्रयास आज से १२ वर्ष पूर्व उदयपुर के विद्या भवन में हुआ था। एक योजना भी बनाई गई थी और तत्कासीन केन्द्रीय शिक्षा मंत्रालय ने इस ओर रुचि भी दर्शायी थी। इस कार्य को सर्वाधिक सफलता पूर्वक करने के लिये सबसे प्रभावशाली संगठन यदि कोई है तो हमारे देश की व्यायाम प्रशिक्षण संस्थायें। उन्हें शीघ्र ही ईस कार्य को हाथ में लेना चाहिये और जिन कलाकारों ने इस क्षेत्र में कार्य किया है, उनके अनुभव से उनको लाग उठाना चाहिये। उदयपुर के भारतीय लोक कला मंडल ने, जिसके संचालन का भार लेखक के कंधों पर है, इस दिशा में अत्यंत महत्वपूर्ण कार्य किया है। उसने माध्यमिक शालाओं के शिक्षकों को इस बिषय में एक अल्पकालीन प्रशिक्षण भी प्रदान किया था, जो कि अत्यंत उपयोगी सिद्ध हुआ। उसके परिणाम कई वर्षों तक उन प्रशिक्षित अध्यापकों से सम्बंधित स्कूलों में देखे जा सकते थे। यही प्रयोग गांवों के लोक कलाकारों पर भी बड़े व्यापक ढंग से इसी संस्था द्वारा किया गया था, जिसके फलस्वरूप राजस्थान के अनेक गांवों में सामुदायिक नृत्यों की पुनः प्रतिष्ठा होने लगी है।

सामाजिक अध्ययन में क्रिया-कलाप : एक सुझाव

तुलसीमल सिंह

सामाजिक अध्ययन भारतीय शिक्षा क्षेत्र में एक नवीन विषय है जिसे अभी तक अध्यापक और जनता दोनों ही अच्छी प्रकार नहीं समझ सके । हमें बच्चों को अच्छे नागरिक बनाना है । उन्हें समाज में रहना सिखाना है । उनमें सामाजिक जीवन की भावनाएं लानी हैं और कौशल उत्पन्न करना है । ज्ञान के बढ़ते हुए खण्डों ने भी बच्चे के ऊपर असम्बन्धित विषयों का बोझ डाल दिया है । उसकी एकता और पूर्णता को अनेकता और अपूर्णता में परिणित कर दिया है । विषयों का प्रारम्भ से हीं विभाजन बच्चे के वातारण के अनुसार पूर्णता प्राप्त करने में बाधा डालता है । वह पूर्ण व्यक्तित्व नहीं प्राप्त कर पाता जो केवल पूर्ण ज्ञान द्वारा ही सम्भव है । सामाजिक अध्ययन इस प्रकार का प्रयत्न है जो सामाजिक विज्ञान के विषयों पर आधारित है ।

इसमें इतिहास, भूगोल और नागरिक शास्त्र आदि विषयों का एकत्रित ज्ञान देने की बात नहीं है । हम सामाजिक शास्त्रों का ज्ञान परिस्थिति और बच्चे की उम्र का ध्यान रखते हुए देते हैं यद्यपि विशेषता इतिहास, भूगोल और नागरिक शास्त्र के विषयों की ही होती है । विषय का चुनाव और व्यवस्था इस प्रकार होते हैं कि विद्यार्थियों को यह मालूम होता है कि वह इतिहास, भूगोल और नागरिक शास्त्र आदि नहीं पढ़ रहे, परन्तु अपने जीवन से तथा समाज से सम्बन्धित ज्ञान पैदा कर रहे हैं, समस्याएं सुलझा रहे हैं; इतिहास भूगोल आदि का ज्ञान केवल उन समस्याओं को समझने के लिए ही है । हम समाज में रहना, समाज को समझना, उसकी समस्याओं को हल करना विद्यार्थियों को सिखाते हैं, इसलिए हमारा अध्ययन का विषय यह समस्याएं हैं, न कि विषयों का ज्ञान । विषय तो हमारे अपने बनाए हुए ज्ञान के खण्ड हैं जिसका प्रयोग हम सामाजिक अध्ययन में अलग-अलग विषय समझ कर नहीं वरन् समस्या के हल में सहायक समझ कर करते हैं ।

Form B.T., I (3) July 1958

परन्तु अभी तक यह ग़लत धारणा कि सामाजिक अध्ययन केवल इतिहास, भूगोल तथा नागरिक शास्त्र का एकत्रित ज्ञान है, चली आ रही है और इसीलिए अब तक सारी पुस्तकें इस विषय पर इस प्रकार लिखी गई हैं कि कुछ अध्याय इतिहास के, कुछ भूगोल के और कुछ नागरिक शास्त्र के जोड़कर रख दिए गए हैं। इसमें न तो बच्चों को नियमबद्ध विषय का ही ज्ञान मिलता है और न समाज में रहने की योग्यताएं ही विद्यार्थी में आती हैं, जो इस विषय के मुख्य उद्देश्य हैं। इन बातों को ध्यान में रख कर उदाहरणार्थ यह एक पाठ लिखा है जो कि बेसिक स्कूल की सातवीं और आठवीं कक्षा के लिए उपयुक्त है।

एक पाठ : उदाहरण

सड़कों की आवश्यकता

बच्चो ! रोजाना आपकी मण्डी में गाड़ियाँ आती हैं, सामान छोड़ जाती हैं और कुछ ले जाती हैं। बाजार में विभिन्न वस्तुएं जो आपके शहर में पैदा नहीं होतीं, दिखाई देती हैं। लोग भी शहर से बाहर के भिन्न वेशभूषा वाले मिल ही जाते हैं। यह सब यातायात के साधनों की कृपा है। यातायात के साधनों में रेल, नदियाँ, वायुमार्ग, समुद्र और सड़कें मुख्य हैं। रेल दूरस्थ स्थानों को मिलाने में उपयोगी हैं। नदियाँ वहीं पर परिवहन का कार्य कर सकती हैं जहाँ पर स्थित हों। कभी-कभी नदियों में से कुछ नहरें भी खोद ली जाती हैं जो परिवहन का साधन हो जाती हैं परन्तु हर स्थान पर यह साधन उपयोग में नहीं लाया जा सकता। जलयान और वायुयान भी सर्वत्र उपयोग में नहीं आ रहे हैं। यह साधन छोटे-छोटे गांवों और निकट के कस्बों को जिले, राज्य अथवा केन्द्र के मुख्य स्थलों से नहीं मिलाते हैं। इन छोटे-छोटे गाँवों को आपस में मिलाने के लिए सड़क ही एक सुगम मार्ग है, इन पर मोटरें, ठेलें, बैलगाड़ियाँ, रिक्शे, साईकिलें और ताँगे आदि परिवहन का कार्य करते हैं।

सड़कों के प्रकार

सड़कें कच्ची और पक्की दोनों प्रकार की होती हैं। छोटे-छोटे गाँवों को आपस में मिलाने के लिए बहुधा कच्ची सड़कों का निर्माण किया जाता है। पक्की सड़कें बड़े-बड़े शहरों, कस्बों, व्यापारिक केन्द्रों, शासन केन्द्रों आदि को मिलाने के लिए निर्मित की जाती हैं।

(यहाँ पर अध्यापक भारतवर्ष की, राज्य की, तथा जिले की सड़कों की लम्बाई दे कर एक दूसरे से तुलना भी दे सकता है। अध्यापक दूसरे देशों की

सड़कों का तुलनात्मक अध्ययन भी करवाएगा और इनसे सम्बन्धित चार्ट और नकशे आदि बनवाएगा ।)

कहाँ कैसी सड़कें

कच्ची सड़कें ऐसी जगह पर बनाई जाती हैं जहां पर कंकड़, गिट्टियाँ और तारकोल आसानी से नहीं मिल पाते अथवा वर्षा के कारण रास्ते में बहुत अधिक नदी, नाले, थोड़ी-थोड़ी दूर पर पड़ते हैं । अधिकतर ऐसी स्थिति मानसून प्रदेश अथवा भूमध्य रेखा के प्रदेशों में होती है। ऐसी जगहों पर अस्थायी, कच्ची सड़कों से काम निकाल लिया जाता है । भारतवर्ष में बंगाल, आसाम और बिहार में पक्की सड़कों का अभाव है क्योंकि वहाँ पर वर्षा के कारण थोड़ी दूर पर नदी नालों पर पुल बाँधने की आवश्यकता पड़ती है जो एक बहुत मंहगा सौदा है । इसलिए इन राज्यों में कच्ची सड़कों से ही अधिकतर काम निकाल लिया जाता है क्योंकि कच्ची सड़कों का बरसात के बाद पानी वह जाता है, और फिर थोड़ी सी क्षति की पूर्ति के बाद सड़कें ज्यों-की-त्यों रह जाती हैं ।

(यहाँ अध्यापक प्राकृतिक भूखण्डों का प्रारम्भिक ज्ञान देकर मौनसून प्रकार के भूखण्ड का विशेष ज्ञान दे सकता है ।)

सड़कों के बनाने में उतार चढ़ाव का भी ध्यान रखना पड़ता है । एकदम चढ़ाई की जगहों पर सड़कें कम प्रयोग में लाई जाती हैं। इसीलिए सड़कें अधिकतर समतल स्थलों पर ही बनती हैं, सड़कों का सम्बन्ध व्यापार से ही है । जहाँ पर समतल भूमि मिले और व्यापार भी अच्छा हो। अक्सर पक्की सड़कें ही बन जाती हैं जैसे भारतवर्ष में, पंजाब और उत्तर प्रदेश के दो प्रमुख राज्य हैं ।

सड़कों की सामग्री

(अ) कच्ची सड़कें—

कच्ची सड़कें मिट्टी की होती हैं और ऐसी ही जगह हो वैसी ही मिटटी से प्रायः काम चल जाता है । परन्तु रेतीली मिट्टी से कच्ची सड़कें भी नहीं बन सकतीं । यही कारण है कि राजस्थान में सड़कों का अभाव है। कच्ची सड़कों के लिए चिकनी मिट्टी विशेष रूप से उपयोगी है । यह मिट्टी बहुधा नदियों के डेल्टों में मिलती है क्योंकि डेल्टे की स्थिति तक नदी ऊपर से लाये हुए मिट्टी के टुकड़ों को बहुत ही छोटे-छोटे भागों में बिभक्त कर देती है ।

(यहां पर अध्यापक नदियों के कार्य बता सकता है ।)

परन्तु कच्ची सड़कें अधिक उपयोगी नहीं होतीं। कच्ची सड़कों पर अकसर धूल उड़ती रहती है जो साँस के साथ अन्दर जाकर फेफड़ों पर बुरा प्रभाव डालती है और आंखों को भी हानि पहुँचाती है। बरसात के दिनों में सड़क पर कीचड़ हो जाती है।

(यहाँ स्वास्थ्य विज्ञान का ज्ञान दिया जा सकता है।)

(ब) पक्की सड़कें—

पक्की सड़कों के लिए गिट्टी, कंकड़, डामर और बजरी की आवश्यकता पड़ती है।

गिट्टी

ये आग्नेय चट्टान के टुकड़े हैं। सारे संसार की प्राथमिक चट्टानें आग्नेय चट्टानें हैं। भारतवर्ष का प्लेटो सारा ही आग्नेय चट्टानों का बना है। पंजाब में गिट्टियाँ बहुधा कांगड़े के आग्नेय पर्वतों से मंगवाई जाती हैं। उत्तर प्रदेश और दिल्ली प्रान्त में आबू के पर्वत की श्रेणियों से गिट्टी ली जाती है। बिहार के लिए गिट्टियाँ छोटा नागपुर की पहाड़ियाँ दे सकती हैं और दक्षिण भारत में तो गिट्टियों की कोई कमी ही नहीं है।

(अध्यापक विभिन्न चट्टानें एकत्रित कराकर अथवा प्रमाण द्वारा उनका ज्ञान भी दे सकता है।)

कंकड़

कंकड़ चूने की चट्टान के एकत्रित टुकड़े हैं। यह भारतवर्ष में आन्ध्रप्रदेश, पश्चिमी उत्तर प्रदेश और राजस्थान में बहुतायत से मिलते हैं। चूँकि कंकड़, कार्बन डाइऑक्साइड जो बरसाती पानी में अक्सर होता है, से बह जाता है इसलिए इसकी उपयोगिता अब सड़क बनाने में कम हो गई है। राजस्थान में इसके मकान बनाए जाते हैं क्योंकि वहाँ पर वर्षा कम होती है। आन्ध्रप्रदेश का चूना टाटा आयर्न वर्क्स जमशेदपुर में लोहे को साफ करने के काम आता है।

(अध्यापक चूने सम्बन्धी अन्य ज्ञान दे सकता है।)

तारकोल

यह कोयले का बाई-प्रॉडक्ट है। कोयले में से सोफ्ट-कोक बनाने के समय निकाला जाता है।

(अध्यापक कोयला आदि खनिज पदार्थों का संकलन कराकर अथवा फिल्म दिखा कर अनेक खनिजों का ज्ञान करा सकता है।)

सड़कों का इतिहास

सड़कें मनुष्य के घुमक्कड़ स्वभाव का प्रतीक है। प्रारम्भ में मनुष्य ने इधर-उधर जाने के लिए, सामान लाने, ले जाने के लिए छोटी-छोटी पगडंडियाँ बनाई होंगी। जैसे-जैसे परिवहन की सामग्री बढ़ती गई उन पगडंडियों को विस्तृत करने और स्थाई बनाने का प्रयत्न भारवाहन के साधनों में उन्नति के साथ-साथ बढ़ता गया और इस प्रकार बहुत ही प्राचीन काल में सड़कों का जन्म हो गया। प्रारम्भ में कच्ची सड़कें ही रहीं लेकिन ज्ञान की वृद्धि के साथ-साथ स्थायी रूप से सड़कें बनाने का ज्ञान भी बढ़ा। आवश्यकताओं ने सहयोग दिया। पूर्व की आवश्यकताएं अक्सर यौद्धिक अथवा प्रशासनीय रही है और युद्ध अथवा प्रशासन के लिए प्राचीन राजा महाराजाओं ने अपने राज्यों में सड़कों का प्रयोग किया। आधुनिक ढंग की पक्की सड़कों का लेख हमें शेरशाह सूरी, चन्द्रगुप्त मौर्य, अशोक, चन्द्रगुप्त विक्रमादित्य, मुहम्मद तुगलक और अकबर आदि राजाओं या बादशाहों का मिलता है, अंग्रेजों ने तो भारतवर्ष में सड़कों का जाल सा बिछा दिया था।

गुप्त और मौर्य वंशीय राजा प्रजा पालक थे। उनका राज्य भी बहुत विस्तृ था, व्वापार की उन्नति भी इनके काल में बहुत हुई। इसलिए इन्होंने प्रजा के सुख, राज्य की रक्षा तथा व्यापार को प्रोत्साहन देने के लिए अपने विशाल राज्यों में सड़कों का जाल सा बिछा रखा था। किनारों पर छायादार बृक्ष लगवाए थे और कुएँ, सराएँ आदि यात्रियों की सुविधा के लिए बनवाए थे।

मुहम्मद तुग़लक एक दार्शनिक बादशाह था। वह प्रजा के हित के लिए बहुत से ऐसे कार्य कर गया जो एक तरह से उस समय से आगे थे और उस समय की प्रजा ने कष्ट भी सहे, इसलिए इसे 'विद्वान मूर्ख' कहते हैं। एक मूर्खता के कारण उसने एक लम्बी सड़क भी बनवा दी जो दिल्ली से देवगिरि तक और जो दिल्ली के लोगों को पुनः देवगिरि में बसाकर देवगिरि को राजधानी बनाने के लिए बनवाई गई थी।

शेरशाह सूरी को निरन्तर युद्ध करने पड़े क्योंकि बह मुगलों को भारतवर्ष से निकालना चाहता था। इसलिए उसने बिहार और बंगाल जहाँ पर उसका प्रादुर्भाव हुआ, से भारत के पश्चिमोत्तर भाग तक सड़कें बनवाईं। उसकी सड़कें अब तक प्रसिद्ध हैं। एक सड़क सुनार गांव से लेकर लाहौर तक, दूसरी लाहौर से मुलतान तक, तीसरी आगरा से जोधपुर और चित्तौड़ तक और चौथी आगरा से बुरहानपुर तक बनवाई। इसकी सर्वं प्रसिद्ध सड़क जो ढाका से पेशावर तक चलती थी, जड़नैली या ग्रान्ड ट्रंक रोड के नाम से अब भी प्रसिद्ध हैं।

मुग़लों ने भी व्यापारिक उन्नति, राज्य प्रबन्ध ग्रौर नये राज्य जीतने की लालसा में उत्तर भारत को दक्षिणी भारत से सड़कों द्वारा मिलाया। सीमान्त प्रदेश में फौजें स्थित कीं ग्रौर इसलिए दूरस्थ प्रदेशों तक सड़कें बनवा दीं। अंग्रेजों ने कलकत्ता, मद्रास और बम्बई तीनों प्रेंजीडेन्सी नगरों को मिलाने के लिए बड़ी-बड़ी सड़कें बनवाईं ताकि युद्ध के समय में फौजें एक स्थान से दूसरी स्थान पर आसानी से भेजी जा सकें। देहली राजधानी बन जाने के वाद देहली को कलकत्ता और बम्बई ग्रौर पेशावर से मिला दिया गया।

(ग्रध्यापक मुहम्मद तुग़लक, शेरशाह सूरी, अकबर, ग्रशोक, चन्द्रगुप्त मौर्य, चन्द्रगुप्त विक्रमायित्य के विषय में भी यहां पर ज्ञान दे सकता है।)

सड़कों के निर्माण के संयोजक

सड़कों के निर्माण का कार्य ग्राजकल केन्द्रीय सरकार, प्रान्तीय सरकारें, जिला बोर्ड ग्रौर नगरपालिका कर रही हैं। केन्द्रीय सरकार के केन्द्रीय-जन-कार्य-विभाग द्वारा राज्यों से मिलाने वाली मुख्य सड़कों की बनवाती तथा उनकी रक्षा भी करती है। इस कार्य को करने के लिए विभिन्न संस्थाएं कर लगाती हैं।

(अध्यापक जिला बोर्ड ग्रौर नगर पालिकाओं के संगठन ग्रौर ग्रन्य कार्य भी यहां बता सकता है।)

प्रान्तीय सरकारें अपने जन-कार्य-विभाग द्वारा सड़कें वनवाती, उनके किनारे पेड़ लगवाती ग्रौर स्थान स्थान पर अड्डों का भी प्रबंध करवाती है, यह सड़कें जिले को जिले से मिलाती हैं और व्यापार के मुख्य केन्द्रों को भी मिलाती हैं। जिला बोर्ड जिले की सड़कों का प्रबन्ध करता है। गांव से गांव और गांव से शहर ग्रौर मंडियों का मिलाना इसी का कार्य है। जिला बोर्ड कच्ची और पक्की दोनों प्रकार की सड़कों को बनवाता है। किनारों पर पेड़ लगवाता है ग्रौर बनी हुई सड़कों की रक्षा भी करता है। नगरपालिकाएं शहर की सड़कों का जिम्मेदार होती हैं, हमारी सरकार ने सड़कों की महत्ता को अच्छी तरह पहचाना है ग्रौर एक सड़क-ग्रनुसन्धानशाला भी खोली है जो सड़क बनानेवाली वस्तुग्रों पर प्रयोग ग्रौर बनी हुई सड़कों का परीक्षण करती है।

(ग्रध्यापक, सड़कों पर जो ग्रनुसन्धान हुए हैं, उनका विस्तृत विवरण भी दे सकता है। स्वायत्व राज्य के बिषय में भी पढ़ा सकता है। नगरपालिका का इतिहास भी दे सकता है।

सड़क बनाने वालों का जीवन

सड़कों पर काम करने वाले लोग गरीब तबके के होते हैं। ग्रधिकतर

बाढ़-पीड़ित अथवा सूखा से नष्ट हुई फसल से दु.खी लोगों को सड़क बनाना एक सहारा बन गया है । राजस्थान के बागड़िये सड़कों पर विशेष रूप से कार्य करते हैं । यह लोग अशिक्षित होते हैं । अपने परिवारों सहित सड़क पर काम करने जाते हैं और छोटी छोटी झोंपड़ियों में रहते हैं । इनके वस्त्र इनकी गरीबी का द्योतक होते हैं । लेकिन साथ ही साथ भारत की प्राचीन सभ्यता के प्रतीक भी हैं । पुरुष धोती, अंगरखा अथवा बंडी पहनते और सिर पर साफा बांधते हैं । स्त्रियाँ लहंगा और फरिया का प्रयोग करती हैं । लहंगे और फरिए गहरे रंग के सुए (लाल) या नीले रंग के होते हैं । रेगिस्तान के रहने वाले बागड़िये निरन्तर सूखी और चमकीली रेती को देखकर ऊब जाते हैं । यह काम करने के पश्चात् अपने दरिद्र जीवन में भी सुख और सन्तोष से रहते हैं और त्यौहारों को बड़े धूमधाम से मनाते हैं । इनके विशेष त्यौहार होली, दिवाली, आदि हैं । ढोलक, मजीरा और ढपली इनके जीवन के साथी हैं । लगभग प्रति दिन ही उनकी झोंपड़ियों में धार्मिक गीत और भजन होते ही रहते हैं, यह लोग भाग्यवादी और पक्के ईश्वर भक्त होते हैं लेकिन अशिक्षित होने के कारण गन्दगी और तदानुसार बीमारियों के शिकार होते रहते हैं ।

गरीब और अशिक्षित होने के कारण इनमें बहुत सी कुरीतियां भी प्रचलित हैं । बाल विवाह, बहु-विवाह, भाई की मृत्यु के बाद भाभी से शादी कर लेना, दो लड़कों या लड़कियों की शादी एक साथ करना, दहेज प्रथा, भूत प्रेत में विश्वास, टोने टोटके में विश्वास, लीला गुदवाना आदि कुरीतियां प्रचलित हैं ।

इनके अफसर शहरी वातावरण से आए हुए होते हैं और इसका प्रभाव यद्यपि मजदूरों पर कम होता है परन्तु उनके ठेकेदार पर तो अवश्य ही पड़ा है और वह कुछ अंश तक आचार, व्यवहार, शिक्षा और रहनसहन में शहरी जैसे हो गये हैं ।

(अध्यापक अन्य लोगों के जीवन और उनके ऊपर आधुनिक सभ्यता का प्रभाव पढ़ा सकता है । बच्चों को 'परिभ्रमण और संकलन विधि' द्वारा ज्ञान दिया जा सकता है ।)

धार्मिक-सांस्कृतिक पर्व द्वारा समन्वित शिक्षण—एक प्रयोग

नरपतसिंह चौहान

बुनियादी शिक्षा के पाठ्यक्रम के अनुसार वर्ष भर में आने वाले तमाम सामाजिक एवं राष्ट्रीय त्योहारों तथा जयन्तियों पर समुचित शिक्षण दिया जा सकता है। विद्याभवन बुनियादी मदरसे में इस प्रकार के कई आयोजनों का परीक्षण होता रहता है, जिससे निर्धारित पाठ्यक्रम की अधिकांश सामग्री का ज्ञान बच्चों को दिया जाता है। अभी शाला में पर्याप्त संख्या में ऐसे अवसर निश्चित हुए, जिनमें प्रमुख हैं—तुलसी जयन्ती, तिलक जयन्ती, जन्माष्टमी, स्वतन्त्रता दिवस, गणतन्त्र दिवस, १४ नवम्बर बाल दिवस इत्यादि। इनमें से कुछ अवसर सांस्कृतिक दृष्टि से महत्वपूर्ण हैं। जन्माष्टमी इनमें से प्रमुख है।

इस प्रकार के पर्व व त्यौहारों के मनाने के पीछे एक शैक्षिक उद्देश्य है। इसका विवेचन नीचे लिखे अनुसार है।

(१) शाला के क्षेत्रीय गाँवों के लिए आमोद-प्रमोद के अवसर प्रस्तुत करना।
(२) बालकों की अभिव्यक्ति के लिये अवसर प्रस्तुत करना।
(३) समाज में मनाये जाने नाले त्यौहारों में बच्चों के स्तर के कार्यक्रम नहीं होते उनके अवसर शाला में प्रस्तुत करना।
(४) त्यौहारों व पूर्वों को मनाने का आदर्श उदाहरण प्रस्तुत करना।
(५) बच्चों को हमारी सांस्कृतिक धरोहर से परिचित रखना।

इस प्रकार के कार्यक्रम से जहां एक ओर बच्चे अपने जीवन की वास्तविक शिक्षा पाते हैं, दूसरी ओर उनमें अभिव्यक्ति का विकास होता है, उनमें आनन्द और उत्साह का सृजन होता है। इस प्रकार के आयोजनों से अध्यापक व बालक दूसरे के अत्यन्त निकट आते हैं जिससे कि अध्यापक बालकों को समझाने में तथा उनका समुचित विकास करने में सहायता प्राप्त करते हैं।

सर्व प्रथम शिक्षक सभा इस उत्सव से सम्बन्धित सभी कामों की शैक्षिक

सम्भावनाओं पर विचार करती है तथा उसे एक शैक्षिक नियोजन के रूप में स्वीकार करती है।

उत्सव के लगभग एक माह पूर्व कक्षा ४ से लेकर कक्षा ८ तक के सभी कक्षाध्यापक अपनी-अपनी कक्षाओं के स्तर के अनुसार श्री कृष्ण के जीवन से सम्बन्धित पाठ्यक्रम निर्धारित कर शिक्षक सभा में प्रस्तुत करते हैं। सभा में सारी योजना पर पर्याप्त विचार विमर्श करके आवश्यक परिवर्तन के बाद, योजना सभा द्वारा स्वीकृत कर ली जाती है। फिर सारे कार्यक्रम का संयोजन किसी एक कक्षा व उसके कक्षा अध्यापक को सौंप दिया जाता है। अधिकांश इस अवसर का संयोजन कक्षा ५ के जिम्मे रहता है। यह पर्व सांस्कृतिक होने से इसमें मुख्यकर भाषा, सामाजिक अध्ययन, चित्रकला, संगीत, नृत्य इत्यादि के शिक्षण की ही विशेष सम्भावनाएं हैं।

पाठ्यक्रम की सारिणी नीचे लिखे अनुसार होती है—

पाठ्यक्रम की सारिणी

कक्षाएं	भाषा	संगीत	सामाजिक ज्ञान
४	गद्य—कथाएं—देवकी विवाह, श्रीकृष्ण जन्म, गोकुल में की गई श्रीकृष्ण की बाल लीलाएं नाटक—कंस द्वारा देवकी को रथ में बैठा कर ले जाना, आकाशवाणी तथा कंस और वसुदेव का संवाद पद्य—सूरदास रचित श्रीकृष्ण के बाल-लीला के पद	सूरदास द्वारा रचित श्रीकृष्ण की बाल-लीला के पदों को गाना	भाषा समन्वित (कहानियों के द्वारा सामाजिक स्थिति का सामान्य परिचय)
५	गद्य—कथाएं—गोवर्धन पूजा, कालिया दमन, गोकुल से मथुरा, उद्धव गोपी संवाद तथा कंस बध आदि। नाटक—कालिया दमन तथा कंस वध पद्य—कक्षास्तर के अनुसार सूरदास के पद	सूरदास के पदों को गाने का अभ्यास	श्रीकृष्ण के समय की शिक्षा, शु का आश्रम, गोकुल का वैभव और उस समय की अवस्था। (गोपालन का महत्त्व)

	सभापति के नाम पत्र तथा दर्शकों के नाम पर निमन्त्रण पत्र लिखना गद्य—जरासंध वध, रुक्मिणी विवाह, द्रोपदी का चीर हरण पद्य—कक्षा स्तर के अनुसार रसखान के पद तथा मीरा के पद	मीरा के पद	उस समय के भारत की अवस्था का ज्ञान–भौगोलिक, सामाजिक दशा, स्त्रियाँ, राज्य, पितृ भक्ति तथा गौ भक्ति के आदर्श ।
७	गद्य—कथाएं—शिशु पालवध, रण निमन्त्रण, श्रीकृष्ण सुदामा की कहानी पद्य—नरोत्तमदास कृत सुदामा चरित्र का विस्तृत अध्ययन नाटक—सुदामा चरित्र का नाटक काव्य में	सुदामा चरित्र काव्य नाटक के विभिन्न पदों को विभिन्न रागों में गाना	उस समय की सामाजिक अवस्था, रामायण और महाभारत काल का जीवन
८	गद्य—कथाएं—श्रीकृष्ण द्वारा पाण्डवों की सहायता, महाभारत की संक्षिप्त कथा पद्य—हरिऔध व बिहारी की कविताएं श्रीमद्भगवद्गीता के मुख्य-मुख्य श्लोकों का सारांश तथा अपने जीवन से उनकी तुलना	रसखान और हरिऔध के पदों को गाना	महाभारत के विभिन्न पात्रों का चरित्र चित्रण–धर्म व कर्तव्य का सही व विकृत अर्थ, सामाजिक, धार्मिक व राजनैतिक अवस्था, स्त्रियों का स्थान, जाति-पांति, राज्य-लिप्सा, षड्यन्त्र, राजसूय यज्ञ, व्रत, ऋषि, मुनि का सत्कार, आश्रम व्यवस्था ।

इस सारिणी से श्रीकृष्ण के जीवन से सम्बन्धित पाठ्यक्रम का थोड़ा सा मार्ग हमको मिलता है । वैसे इस प्रकार सारे पाठ्यक्रम की तैयारी विभिन्न कक्षाओं के अनुसार विषयगत अथवा कक्षागत अध्यापक पर अवलम्बित है ।

इस योजना से बच्चों को क्या उपलब्धियां होंगी इसका संक्षेप में उल्लेख

किया जाता है।

वाचन—अपने स्तर तथा रुचि के अनुसार विभिन्न पुस्तकों से श्रीकृष्ण के जीवन सम्बन्धी प्रसंग, कविताएं तथा नाटक इत्यादि का वाचन। इसमें गीता प्रस गोरखपुर की पुस्तक "भगवान श्रीकृष्ण" तथा "प्रेम सागर" प्रमुख हैं।

लिखित कार्य—पढ़ी हुई कविताओं को तथा खेले जाने वाले नाटक के अंशों को सुन्दर लिपि में लिखना। कार्य की योजना के विभिन्न अंशों का लिखित ब्योरा रखना, यथा नाटक पात्रों की सूची, स्टेज के साधन, विभिन्न पात्रों की वेश भूषा आदि।

संकलन प्रकाशित करना—जिसमें बालकों द्वारा संकलित कहानियाँ, लेख, कविताएँ आदि हों।

उच्चारण—नाटक में अथवा कविता पाठ के अभ्यास के प्रसंग में शुद्ध उच्चारण का अभ्यास।

कलात्मक अभिव्यक्ति—(१) संगीत का अभ्यास—स्वर ताल का अभ्यास, संकलन को कलात्मक ढंग से संवारना। (२) चित्रकला—विभिन्न कक्षाओं के स्तर के अनुसार नीचे लिखा चित्रकला व कलात्मक अभिव्यक्ति सम्बन्धी कार्य किया जा सकता है।

श्रीकृष्ण के झूले का चित्र, श्रीकृष्ण के जीवन से सम्बन्धित विभिन्न कहानी चित्र। श्रीकृष्ण सम्बन्धी चित्रों का संकलन व एलबम। जन्माष्टमी के लिये श्रीकृष्ण की झांकी, स्टेज व शाला की सजावट तथा अलपना आदि कार्य सजावट के विभिन्न साधनों का अध्ययन।

योजना को कार्यान्वित करने में इस बात का ध्यान रखा जाता है कि जहां एक ओर बालको को श्रीकृष्ण के जीवन के विभिन्न प्रसंगों का ज्ञान हो जाय वहां उनके जीवन से सम्बन्धित पात्रों के चरित्र को भली भाँति समझने पर भी पूर्ण बल दिया जाता है ताकि बालक को यह ज्ञान हो जाय कि अमुक पात्र की क्या प्रकृति थी तथा उसके चरित्र का अन्य घटनाओं पर या देश के इतिहास पर क्या प्रभाव पड़ा।

उपरोक्त सारी योजना को कार्यान्वित करने में लगभग १५ दिन लग जाते हैं। इसके अन्त में अष्टमी के दिन उत्सव मनाया जाता है। इसमें प्रायः नीचे लिखे दृश्य प्रस्तुत किये जाते हैं—

(१) कंस द्वारा वसुदेव देवकी को रथ में बैठा कर ले जाना तथा आकाशवाणी होना।

(२) कंस के कारागार में श्रीकृष्ण का जन्म

(३) वसुदेब द्वारा श्रीकृष्ण को गोकुल में ले जाना

(४) रास लीला
(५) माखन चोरी
(६) कालिया दमन

इस शाला में प्रतिवर्ष प्रायः ये ही दृश्य प्रदर्शित किये जाते हैं। प्रश्न पैदा होता है कि प्रति वर्ष एक ही प्रकार के दृश्यों से क्या दर्शकों के मन में उकताहट पैदा नहीं होती ? इसके लिये कुछ अंशों तक यह आवश्यक है कि ये दृश्य प्रतिवर्ष संशोधित एवं परिवर्द्धित रूप में प्रस्तुत किये जायें। दूसरी बात यह भी है कि एक ही प्रकार की वस्तु के अवलोकन में नित्य नया आनन्द अनुभव होता है। जैसे—दशहरे के अवसर पर राम लीला के दृश्य प्रति वर्ष देखने को मिलते हैं। इसी प्रकार प्रति वर्ष एक ही प्रकार की रथ यात्रा का आयोजन भी विभिन्न स्थानों पर किया जाता है। इसी प्रकार के कई अन्य उदाहरण भी हो सकते हैं।

नियोजन का कार्य प्रारम्भ करने के पूर्व कक्षागत बालकों के साथ बैठ कर विचार विमर्श किया जाता है। नाटक के लिए उपयुक्त पात्रों का चुनाव होता है। संकोचशील एवं उत्साही बालकों की परीक्षा हो जाती है। तैयारी के समय अलग अलग बालक और बालिकाओं के व्यवहार और मनोवृत्ति की बातें विदित होती हैं। बालकों में अभिव्यक्ति की शक्ति का विकास होता है। तथा कई प्रकार के उच्चारण दोष दूर किये जाते हैं। काम के समय सभी बालक बालिकाओं एवं अध्यापक को आनन्द का अनुभव होता है।

व्यवस्था सम्बन्धी नीचे लिखे कामों का विभिन्न कक्षाओं में समुचित विभाजन किया जाता है—

१—स्टेज बताना, २—शाला की सजावट करना, ३—दर्शकों के लिए बिछावट करना, ४—पानी का प्रबन्ध करना, ५—निमन्त्रण पत्र भिजवाने, ६—नाटक की पोशाकों का प्रबन्ध करना आदि। इन कामों के द्वारा छात्रों को निःसन्देह कई प्रकार की प्रत्यक्ष शिक्षा प्राप्त होती है।

बच्चे अपने जीवन की वास्तविक शिक्षा पाते हैं, दूसरी ओर उन में अभिव्यक्ति का विकास होता है। वे आनन्द और उत्साह का सृजन करते हैं। इस प्रकार के आयोजन से शिक्षक एवं छात्र एक दूसरे को भली प्रकार समझने में समर्थ होते हैं और इससे बालकों के सर्वांगीण विकास में सहायता मिलती है।

काम पूरा हो जाने के पश्चात् शिक्षक-सभा में सारे काम का सिंहावलोकन किया जाता है, जिसमें काम के स्तर को उत्तरोत्तर ऊंचा उठाने की दृष्टि से पर्याप्त रूप में विचार विमर्श होता है। इस प्रकार के विचार विमर्श का प्रभाव आगामी वर्ष के कार्य पर अवश्य पड़ता है।

सारांश यह है कि इस शाला में परम्परागत शिक्षण के अतिरिक्त महत्त्वपूर्ण अवसरों के माध्यम से छात्रों का शिक्षण कराया जाता है। इस प्रकार के शिक्षण से छात्रों को कोई भार मालूम नहीं पड़ता और वे अपने उत्साह और आनन्द के साथ तत्सम्बन्धी विविध बातों का ज्ञान अनायास ही कर लेते हैं।

अमरूद की काश्त और समवाय पाठ

रामकुमार चौधरी

नई तालीम की शाला में विद्यार्थियों के विकास के दोनों पहलुओं (शारीरिक एवं मानसिक) को समान महत्त्व दिया जाता है, जिससे कि बालक का सर्वांगीण विकास हो सके । विद्यार्थियों के स्वास्थ्य की समय-समय पर जांच होना और सुधार की व्यवहारी योजना बनानी चाहिए । बुनियादी माध्यमिक शाला, रसूलिया, होशंगाबाद, मध्य प्रदेश के विद्यार्थियों की पूर्ण स्वास्थ्य परीक्षा सन् १९५६ में ली गई । वजन लेना, उंचाई नापना, छाती नापना इत्यादि कार्य विद्यार्थियों ने किया । निश्चित आयु के स्वस्थ बालक का शारीरिक विकास के मापों से इसकी तुलना की । पर्यवेक्षण और अध्ययन से ज्ञात हुआ कि केवल ५ विद्यार्थी ही पूर्ण स्वस्थ हैं ।

ये विद्यार्थी क्यों स्वस्थ थे इस पर चर्चा हुई । भोजन क्या करते हैं, यह पूछा गया । ये विद्यार्थी ढीमर जाति के थे इसलिए भोजन में मछली भी लेते थे । अन्य विद्यार्थियों का भोजन पौष्टिक सिद्ध न हुआ । इसे आधार मान कर सन्तुलित भोजन क्या है यह समझाया गया । अधिकांश विद्यार्थी निरामिष भोजन ही लेने वाले थे । आमिष भोजन धार्मिक और सिद्धान्ततः अग्राह्य था । इसकी पूर्ति कैसे करें ? यह तय हुआ कि यह फल और साग भाजी द्वारा सम्भव हो सकता है । छात्रावास के विद्यार्थियों ने योजना बना कर अमरूद पैदा करने का नक्शा तैयार किया । नक्शा बनाने में की गई क्रिया द्वारा विद्यार्थियों ने बहुत कुछ सीखा, यदा (अ) चेन सर्वेक्षण (आ) चेन की लम्बाई को नक्शे पर इंचों में बनाना (इ) कोनों के कोण का अंशों में माप (ई) नक्शे पर दिशाओं का निर्णय और स्थापना (उ) फल के वृक्षों का स्थान निश्चित करके उनकी लगाने की दूरी तय कर संख्या निकालना ।

इस योजना को आधार बना कर अन्य सम्बन्वित विषयों के समवायी पाठ पढ़ाये गये, जिनकी थोड़ी चर्चा इस लेख में है ।

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(१) फलों का महत्त्व—सन्तुलित भोजन के लिए फल अति आवश्यक हैं। अमरूद का पौधा जल्दी और आसानी से तैयार हो जाता है। होशंगाबाद में अमरूद बहुतायत से होता है।

फल वाले पौधों को फसल की दृष्टि से २ भागों में विभाजित कर सकते हैं। (अ) मौसमी जैसे टमाटर (ब) बहुवार्षिक जैसे आम, अमरूद इत्यादि। इनके उदाहरण दिये एवं अर्थ समझाये। (अ) अमरूद (झाड़), (ब) झाड़ियां (अनार), (स) पौधे (टमाटर), (ड) लता (अंगूर), (इ) रोपा, इनके अर्थ समझाये एवं उदाहरण दिये।

अमरूद का भोजन के रूप में उपयोग : अमरूद फल में विटामिन सी की मात्रा अधिक परिमाण में रहती है। विटामिन सी दाँतों की मजबूती के लिए आवश्यक है। विटामिन सी की कमी के कारण होने वाले रोग में ताजे फल स्वास्थ्यप्रद होते हैं। अमरूद के फल का अचार, मुरब्बा तथा चटनी बनती है, जिसका भोजन के साथ उपयोग भी किया जा सकता है। छात्रालय में साधारण पद्धति से मुरब्बा और अचार बनाया।

(२) बगीचे के लिए स्थान का चुनाव : व्यापारिक दृष्टि से बगीचा लगाना (अ) शहर के पास (ब) सड़क से मार्ग जुड़ा हो। बगीचे की रखवाली सरलता से हो सके, खेत में बाढ़ और पानी न भरता हो, पानी अधिक गहराई पर न हो।

भूमि का चुनाव : रेतीली मटियार भूमि अमरूद के बगीचे के लिये अच्छी होती है। काली मिट्टी इसके लिये अच्छी नहीं होती। भूमि की परिभाषा तथा भूमि के प्रकार बता कर अर्थ समझाया (अ) रेतीली, (ब) दूमट, (इ) रेतीली दूमट, (ई) मटियार दूमठ, (क) कंकरीली।

जलवायु के आधार पर वर्गीकरण : भारत की मिट्टी को जलवायु के आधार पर तीन वर्गों में बांटा जाता है। (अ) अधिक वर्षा वाले प्रान्त की मिट्टी, जलवायु, मुख्य उपज। (ब) सूखे प्रान्तों की मिट्टी, जलवायु, मुख्य उपज। (स) मामूली वर्षा वाले प्रान्तों की मिट्टी, जलवायु, मुख्य उपज।

जलवायु की मिट्टी को चार भागों में विभक्त किया जाता है। (१) सिन्ध गंगा के मैदान की कछार, सिन्ध और गंगा नदी का भारत में सांस्कृतिक और ऐतिहासिक महत्त्व। नदियों के किनारे सभ्यता का विकास। राजा भागीरथ का भागीरथ प्रयास। राम कृष्ण की क्रीड़ा भूमि, कवि और दार्शनिकों की तपोभूमि। (२) दक्षिण पठार की कपास वाली मिट्टी—मराठों की कर्मभूमि, मराठी सभ्यता तथा रहन-सहन। मराठी सत तथा समाज सुधारक। (३) लाल मिट्टी—मद्रास-मैसूर में पाई जाने वाली द्रविड़-सभ्यता। शंकराचार्य और रामानुज की याद। (४) समुद्री किनारे तथा दक्षिणी पठार

के चारों ओर पाई जाने वाली मिट्टी । इन मिट्टियों में होने वाली मुख्य फसल की जानकारी विद्यार्थियों को दी ।

(३) **मिट्टी की उत्पत्ति :** छीजना क्रिया दो प्रकार से होती है (अ) भौतिक (ब) रासायनिक । भौतिक क्रिया (अ) तापमान (ब) जल (स) वायु (इ) कीड़ों, मकोड़ों, पेड़-पौधों के द्वारा मिट्टी की उत्पत्ति । केंचुये किसान के मित्र हैं । इनके अर्थ समझाये एवं उदाहरण दिये । रासायनिक क्रिया की जानकारी विद्यार्थियों को न दे सके ।

(४) **खेत की बाड़ी लगाना :** फूलों के बगीचे के लिये, पशुओं के नुकसान से बचाने के लिये बाड़ी का प्रबन्ध जरूरी है । विद्यार्थियों ने खेत की बाड़ी स्वयं लगाई । बाड़ी की योजना : खेत की लम्बाई चौड़ाई नाप कर हिसाब निकाला । तार को खींचने का तरीका सीखा, तार को सुरक्षित रखने के लिये बाड़ी वाले पौधे मेंहदी और घावपान लगाये ।

(५) **पौधे लगाने की योजना :** उत्तर जाति के अमरूद के पौधे लगाने की योजना बनाई, अमरूद की जातियां बतलाईं । (अ) सफेदा (ब) इलाहाबादी (स) करेला (ह) टोमी । शाला के कृषि मंत्री ने ५० पौधों का आर्डर दिया । खेत को नाप कर उसका चित्र बनाया । वर्गाकार, आयताकार, त्रिकोणाकार, षटभुजाकार तरीके से पौधे लगा कर अध्ययन कराया । क्षेत्रफल में लम्ब डालना, लम्ब डालने की साधारण रीतियां, समभुजी त्रिकोण, षटकोण और वृत्त के सिद्धान्त सिखाये । एक ही रकबा के षटकोट में वर्गाकार की अपेक्षा अधिक पौधे लगे । यह तुलनात्मक अध्ययन से नतीजा निकला, इसका प्रत्यक्ष प्रयोग कर अधिक पौध लगाने पर अनुपात निकाला जो कि १५ प्रतिशत अधिक निकला । अमरूद के पौधों का अन्तर २० फुट रखा तथा पौधे षटकोण में अगस्त माह में लगाये गये । गणित में अभ्यास कराया गया कि २०-२० फुट पर पोधे लगाये तो १ एकड़ में कितने पौधे लगेंगे । संतरे के पौधे २२ फुट पर और आम के ३४, ४० फुट पर लगाये जाते हैं तो आम और संतरे के वर्गाकार में तथा षटकोण में कितने पौधे लगेंगे ?

(६) **पौधे लगाना :** गड्ढे के केन्द्र में १ गड्ढे का केन्द्र जानने की रीति । गोला, आयत, वर्ग, त्रिकोण और षटकोण के केन्द्र निकालने की रीति विद्यार्थियों ने सीखी ।

(७) **खाद :** खाद क्या है ? वनस्पतियों की आवश्यकताएं । तीन मूल तत्व फासफोरस, पोटास, नत्रजन । ये तत्व पौधे की कौन-कौन-सी आवश्यकताएं पूरी करते हैं । खाद के भेद (अ) नैसर्गिक (ब) कृत्रिम खाद के अर्थ समझाये तथा उदाहरण दिये । एक घन फुट खाद का वजन । बर्ग और घन क्या है ?

उन में अन्तर। गोबर का खाद अमरूद के पौधे लगाते समय गड्ढों में दिया। पतगाड़ी गोबर के खाद का वजन निकाला।

(८) **सिंचाई :** आवश्यकतानुसार सिंचाई की तथा समय आने पर गुड़ाई की। गुड़ाई का महत्त्व समझाया। वर्षा के दिनों में काफी वर्षा होने के बाद भी पौधों को पानी की क्यों आवश्यकता होती है ? पौधा भोजन किस रूप में लेता है ? वर्षा का पानी भूमि से कहां चला जाता है ? (अ) वृक्षों और पत्तों की प्राश्वासन क्रिया (ब) भूमि से भाप द्वारा उड़ जाना (स) पानी का धरातल से बह जाना (इ) पानी का मिट्टी के अन्दर चला जाना।

सिंचाई के स्रोत (अ) कुआ (ब) नदी (स) तालाब (इ) बांध। प्रान्त की तथा देश की कुछ बांध योजनाए बतलाई। सिंचाई के साधन—ढेंकली, मोट, रहट, हैंड पम्प, एंजिन पम्प। हमारी शाला के पास डीजल पम्प है। डीजल एंजिन पम्प समझने के लिये विद्यार्थियों को हैंड पम्प का प्रत्यक्ष अभ्यास करा कर सिद्धान्त समझाये। (१) फुट बाल्व (२) पिस्टन बल्व व इन दोनों का अंतर २५ फुट से कम क्यों रखा जाता है ? फुट बाल्व और पिस्टन बाल्व का क्या उपयोग है ? सैक्शन और डिलीवरी पम्प क्या है ? २५ फुट पानी क्यों चढ़ जाता है ? हवा का दबाव और दबाव के हटने का क्या प्रभाव होता है ? डीजल एंजिन की साधारण जानकारी––एंजिन चालू करते समय सावधानियां, पट्टा चढ़ाना, पट्टा टूटने पर जोड़ना, कार्बन जमने पर साफ करना, तेल लाइन साफ करना, पाइप के अंदर की हवा खाली करना।

अमरूद के पौधों के बीच में पपीते के पौधे लगाये। पपीता का पौधा एक वर्ष में फल दे देता है। पपीते के फूल द्वारा नर, मादा, फूल की पहिचान। फूल के अंगों के नाम तथा उनके कार्य समझाये। सेंचन क्रिया के भेद, (अ) आत्मसेचन (ब) परसेचन क्रिया का अर्थ समझाया।

(६) **बीच की पौध :** अमरूद के पौधे के बीच में साग सब्जी लगाई।

साग-सब्जी की बिक्री—बाजार में साग-सब्जी की दुर्दशा। विद्यार्थियों के साथ साग-सब्जी लेकर बाजार में दो बार बेची। बाजार का अवलोकन किया। बाजार में दलालों का राज्य, उसका हल, सहकारिता। किसानों की अशिक्षा और असहकारिता की भावना उन्हें नुकसान में डालती है। सहकारिता के सिद्धान्त तथा ग्राम सहकारी दुकान का अवलोकन किया।

(१०) **जमा खर्च :** खेती पर हुआ जमा-खर्च का हिसाब विद्यार्थियों ने रखा। समय और विद्यार्थियों के काम का लेखा विद्यार्थी ठीक से न रख सके। वृक्षों का साहित्यिक और सांस्कृतिक महत्त्व तथा प्राकृतिक वर्णन सम्बन्धी कविताओं का संकलन विद्यार्थियों ने किया।

(११) **मूल्यांकन** : विद्यार्थियों में सौंदर्य व स्वावलम्बन की भावना का विकास हुआ । जीवन में व्यवस्था आई । इससे उनके रहन-सहन और विचारों में बड़ा परिवर्तन हुआ । कुछ विद्यार्थियों ने अपने घरों पर भी अमरूद, नीबू और पपीते के पौधे लगाये । साग-भाजी की घर-घर बगिया भी आरम्भ की ।